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Oregon agricultural college, Corvallis,

THE
Business Side of Farming

PART I
FARM RECORDS

BY
J. A. BEXELL, A. M.,
DEAN SCHOOL OF COMMERCE
OREGON AGRICULTURAL COLLEGE

SECOND EDITION

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The College Bulletins are sent free on request. Questions on any phase of *The Business Side of Farming* will be cheerfully answered. Address Prof. J. A. Bexell, Corvallis, Oregon.



This desk is provided with a fire-proof safe, combination lock, with ample capacity for valuable records. See page 46.

THE FARMER'S DESK.

CHAPTER I

INTRODUCTORY

It is a truism to say that the financial side of farming is of the utmost importance. But the fact remains that this side of the world's greatest industry is almost entirely neglected by both the farmer and the schools. Professor Bailey says on this subject: "In visiting practically every farm in one of the counties of the state (N. Y.) we did not find one man who knew how much it cost him to produce milk or raise any of his crops."

Prosperity of the Farmer

The Secretary of Agriculture, in recent Year Books, points out the remarkable prosperity of the farmer; that the export of farm products is vastly in excess of all other exports combined; that a million agricultural debtors have been transformed during the last ten years into the same number of surplus depositors; that, "contrary to his reputation, the farmer is a great organizer, and that he has achieved remarkable and enormous successes in many lines of economic co-operation in which the people of other occupations have either made no beginning at all or have nearly if not completely failed." He points out that most farmers live better than the average merchant or mechanic.

Causes of Success

It is doubtless true that the farmer is becoming a factor to be reckoned with in the business world; that the average farmer knows vastly more about scientific farming than his father did; he understands more thoroughly the value of proper cultivation, of fertilization, of rotation of crops, and of diversified farming; but it cannot be said that he owes his success to improved business methods. He has been successful, rather, in spite of his ignorance in this respect, and because of the lavish generosity of Mother Nature.

Two Phases of Farming

The business of farming assumes two distinct phases: the productive phase and the exchange phase. The one aims to

extract the treasures from the soil; the other, to place them in the hands of the consumer. It is important not only to raise abundant crops, but also to sell the products to advantage.

Importance of the Exchange Phase

The importance of the exchange phase is often lost sight of. A farm may be forced to yield to its maximum capacity, labor may be managed properly and waste reduced to a minimum; and yet the net result may be a loss at the end of the year. As a general economic proposition, it might be said that large crops often result in serious loss to society as a whole. If the net value to the consumer is less than the labor and capital expended on the crop, society is the loser by the difference. Hence the importance of a thorough understanding by the farmer as well as by the merchant and manufacturer of the laws and methods of exchange or commerce.

Farming a Paying Business

That farming is a science has been emphasized so much that the fact that it is also a business is often lost sight of. It is a real business, and one which pays the United States close to eight billion dollars annually. It has been demonstrated repeatedly that no legitimate business pays better than farming. It may be a little more up-hill work at the start, since most farmers begin business with small capital, but it is incomparably safer in the long run, and will insure a competence for old age with greater certainty than any other occupation. But let it ever be borne in mind that the condition for success is that *farming must be conducted on business principles.*

CHAPTER II

OBJECTS AND METHODS OF BOOKKEEPING

Accurate records and accounts are absolutely necessary in the management of every business enterprise, great or small. No business can be successful in the long run unless its condition can be determined at any time, and no conservative business man will fail to prepare a financial statement at the end of his fiscal year. He must determine how he stands, not only with others, but with himself.

Object of Keeping Accounts

One object of keeping accounts is to assist in accumulating property. Another important object is to record a continuous history of business transactions for future guidance. Not only is this profitable, but it is a source of real pleasure and satisfaction to know our standing with those with whom we deal as well as the profits and losses in our business enterprises.

What the Records Should Show

A complete system of farm records should enable the farmer to tell at any time how his business stands with himself and others; the cost of production of staple crops and live stock and the periodical results of both the productive and the exchange phase of his operations. The records should also show personal and household expenses, and, finally, a comprehensive history of the various phases of the enterprise, including plats of crop rotation, fertilizing, etc.

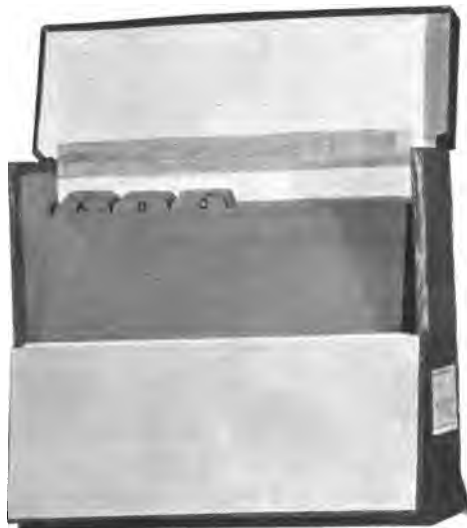
Difficulties of Farm Bookkeeping

Numerous systems of farm bookkeeping have been proposed, but the trouble with them all is that they are either too complicated or altogether unpractical. Professor Bailey says: "The entire subject of farm accounting will not be attacked in a new way. The ordinary bookkeeping must be applied." The reason is obvious. Farming is a much more complicated business than most people suppose. A farmer is both a producer and a dealer. He needs financial records as complete as the

average merchant and cost records as accurate as those of the manufacturer. But the records must be adapted to the business in hand. "The ordinary bookkeeping will not apply." The farmer is usually a very busy man. His chief difficulty is neither ignorance nor indolence. He has little time for fancy bookkeeping and still less for "red tape." What he wants is a plain, simple, straightforward history of his business, so arranged and classified as to require the minimum effort to keep it up. It may be interesting for his children to learn the conventional use of red ink, rulings, closing of books, the intricacies of journalizing, etc., but all this is not necessary to a proper understanding of farm bookkeeping.

Methods of Bookkeeping

In the following pages I suggest two methods of farm bookkeeping whereby the yearly profit or loss may be determined and compared from year to year. The first is extremely simple Single Entry, while the second method is a comprehensive, but very simple, Modified Double Entry, by which the financial standing, the cost of production, profits and losses, etc., can be ascertained at any time. Any farmer with average intelligence will be able to master either method with small expenditure of time and labor.



CHAPTER III

SINGLE ENTRY

The Day Book

The most important record in this method of bookkeeping is the *Day Book*, or what might properly be called the *History of the Farm*. This should be written in the form of a diary, without attempting a close classification of the entries. Always bear in mind, however, that it is safer to give too much rather than too little information in the records. The Day Book should contain any memoranda which might prove valuable for future reference. Conditions of the weather, time of planting, breeding, division of fields, sales, purchases, loans, attendance at conventions, valuable recipes, etc., are proper subjects for entry. Though it is advisable to keep the book as neat as possible, it is unnecessary to spend much time for that purpose. It is more convenient to jot down items in lead pencil as they come along, and then, as time allows, classify them under their respective heads.

The Day Book and Cash Book Combined

In the form on page 13, the Day Book and Cash Book are combined. The ruling is that of an ordinary stock Day Book. In the left-hand column is entered all sums received and in the right-hand column all payments.

While the combined Day Book and Cash Book has the advantage of extreme simplicity, it is often more satisfactory to devote a part of the Day Book, or a separate book, exclusively to cash transactions. Where this plan is followed, it is unnecessary to record all the Cash items in the Day Book. The left-hand page is used for cash receipts and the opposite page for payments.

Bill and Receipt File

A very important part of the farm records is the Bill and Receipt File. A part of the Day Book can be devoted to that purpose, but it is better to provide a separate book. In it should be securely pasted all bills for machinery, implements,

Day Book April 1, 1908

Just years ago, day of business, my present farm inventory cash \$5,000.00. Following is an accurate inventory of all my property and a statement of my affairs as they stand to day

Financial Statement No. 1 Horse Farm April 1, 1908

Resources			
Farm, 160 A. (market value)			\$0.00
Products:			
200 bu. Corn	50	100	
150 bu. Oats	45	67.50	
200 bu. Wheat	85	170	
20 tons Hay	6.00	120	
Potatoes and Vegetables		50	507.50
Stocks:			
6 Horses, average	100.00	600	
20 Cows	40.00	800	
11 Steers	12.00	132	
5 Heifers	11.00	55	
12 Pigs	6.00	72	
100 Sheep	3.00	300	19.89
Remainder of Resources omitted			1083.25
Life Insurance (Paid-up value)			964.36
Cash			170
Total			12684.11
Liabilities			
Notes unpaid		75	
Accounts Payable		125.15	
Mortgage due April 1, 1910	3000		3200.15
Net Worth			9483.86

OPENING ENTRY AND INVENTORY

FARM RECORDS

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Day Book, April, 1908.		Received	Paid
March 1	Cash on hand	176	
	1 Hogs rain storm		
	Shed Cap and Mand		3
	2 Tarr. Coal		8
Thurs 2	Attended Seaside Convention at Portland. Program and report Filipino Expenses		8.40
Wed 3	Paid gateway list at Seaside with on file, p. 16		11.40
Thurs 4	Bought mulch car of J. C. Smith		40
	4 Attended concert of the Eastern Jubilee Singers with family		2
Fri 5	Sold cap to P. A. Anderson 1 pair of shoes	7	1.50
Sat 6	Bought for cash 10 lb 1 st , Hammer 45¢, Nail 50¢		1.95
	6 Went to Portland to select supplements, expenses		3
Sund 7	Dr. E. Hapington preached on "Civic Honor" Collection		2.5
Tues 9	Shore for Taddei		2
	Forwarded	177	81.50

DAY BOOK

tools, livestock, nursery stock, furniture, etc., which will be subject to inventory, but not bills for supplies, feed, table expenses, etc.; also receipts for the payment of money, cancelled notes, certificates of pedigree, important clippings from periodicals, and any other matter of interest. This will prove an invaluable record for future guidance. Many prefer the alphabetical file, illustrated on page 10.

The Inventory

The inventory may be considered the most important document among the farm records, because without it no results at all can be obtained. It should be taken at such a time as will give the most accurate results with the least expenditure of labor. This differs widely in different localities. January 1st seems the most natural beginning of the fiscal year, but the objection is that at this time there is apt to be a large quantity of feed and supplies on hand.

April 1st would be a better date so far as stock on hand is concerned, but inconvenient in many localities on account of the pressure of spring work. Whenever it is taken, it should be accurate. No guess work should be tolerated. Weigh and count; do not estimate. Then assign the actual market value to the property, taking due account of depreciation.

Depreciation

Neither an old wagon nor an old horse is worth as much as new ones. The same holds true with very few exceptions of all equipment, animals, houses, and improvements. The question as to what rate shall be charged off annually, so as to create a sinking fund with which to renew the depletion, has been an open question with accountants since time immemorial. It is particularly difficult to determine the depreciation of live stock, work horses, and a depletion of the fertility of the soil. Without entering into a discussion of the subject, I give below the experience and opinion of the best authorities on the subject. The thoughtful farmer will find no difficulty in adjusting these rates to suit his conditions. For the purpose of general estimates, the following rates on the cost or market value are fairly accurate:

Buildings (including insurance and repairs) .	5 per cent.
Horses, above 5 years.....	10 per cent.
Milch cows	8 per cent.
Machinery and tools.....	10 per cent.

How to Determine the Profits

The all-important question at the end of each year is: Has the work for the year been a financial success or failure? To determine the profits or losses is, therefore, a problem to be solved each year. As a matter of fact, it is a very simple problem, and it becomes easier the oftener it is done.

Let us assume that heretofore you have kept no books whatever, but you have now decided to make a start. You have procured a simple, substantial Day Book (may be purchased at any stationery or drug store), and after listing all your property, you are prepared to make the entries shown in the illustration. April 1st is selected as the beginning of the fiscal year, because on that date the supplies, grain, feed, etc., are usually low, and the average farmer has considerable time to spare. Of course, this varies in different localities, and any other date may be selected to suit the farmer's convenience. The proper opening entries, including the inventory, are shown on page 12.

A Year Later

A year has passed and we are now ready to determine the result of the year's work. Since we have kept the only memoranda in the day book, the best we can do is to take another inventory exactly similar to the last one. This we will now proceed to do.

The second financial statement and the statement of Profit and loss are illustrated on page 17.

Net Earnings

The net profits shown in the illustration, page 17, include the interest on the investment and the wages of the members of the family. To find the net earnings of the proprietor, the value of the household goods, life insurance, cash, and the cost of the dwelling should be deducted from the last year's inventory. Then find the interest on the remainder at a fair rate; this deducted from the profit gives the earnings of the

family. This is illustrated further in Lesson 11. If members of the family, engaged in productive work, receive regular pay before the statement is made, the final result is the net profit above wages and interest. The question might be asked: why deduct the value of the dwelling before the interest is taken? The reason is that the dwelling is not a productive investment. It is apt to be more or less valuable than the average standard, according to the taste and ability of the owner. Amounts drawn for personal use should, of course, be added to the net earnings.

Continued Inventories

It is often convenient to tabulate the annual inventories as follows:

ITEMS	April 1 1908	April 1 1909	April 1 1910	April 1 1911
Farm, 160 acres (market value) .	8000	8620		
Produce	507 50	547 86		
Stock	1959	1966		
Poultry				
Life Insurance	964 36			
Cash	170	126 04		
Total				

Personal Accounts

A farmer frequently retails his products to his neighbors or to townspeople, if he lives near town. In such cases it often happens that he can sell to better advantage by running an account with steady customers, collecting by the week or month. If this phase of the business is extensive, as is the case in truck farming, dairy, poultry, and the like, it would pay the farmer to provide tickets or coupons and sell five or ten dollars' worth in advance even at a small discount. But generally an account with each customer, kept either in a separate book or in part of the Day Book, will be found satisfactory. However, most farmers sell their products for cash, or exchange for merchandise, which is equivalent to cash sales. It is, therefore, unnecessary to enter into an elaborate discussion of keeping such accounts.

Some farmers, very unwisely, attend to the personal business of their hired help, even to the extent of buying their smoking tobacco. There is absolutely no excuse for such a

FARM RECORDS

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Financial Statement No. 2, April 1, 1909				
Resources.				
Farm, 160 A (market value)				\$624
Products.				
Wheat, 150 bu. Corn	58	\$8,580		
175 bu. Oats	43	7,525		
250 bu. Wheat	87	220 11	377 86	
Hay 20 tons Clover	6.50		130	
Potatoes & Vegetables			40	
Stock.				
6 Horses average	100.00	600		
1 3-year old Horse "Juni"		150		
22 Cows average	42	924		
14 Steers	13	182		
11 Hogs	11	44		
11 Hogs	6	66	1966	
Poultry.				
165 Chickens	45	7425		
25 Turkeys	75	1875		
10 Geese	70	7	100	
(Remainder of Resources omitted)				2602.40
Cash & Bank				12604
Total				13962.30
Liabilities				
Labor (unpaid)		85		
Accounts Payable		14332		
Mortgage, paid April 1, 1910		3000		
Note from Western Lumber Co.		200		
Due on Farm		200	3627.32	
Net Worth				10334.98
Statement of Profit & Loss				
Net Worth now		10334.98		
Net Worth last year		9483.96		
Net Profit				851.02

SECOND FINANCIAL STATEMENT

Ms. Richard King

PERSONAL ACCOUNTS

FARM RECORDS

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Dr.				Cash				Cr.			
1909				1909				1909			
Apr 1	2 tons clover	4	12	Apr 1	Household		30				
	1 80 bu Corn	4	52		Crops		10				
	6 25 Steers		80		Stock		65				

practice. Rather pay your help in installments and let them settle their own bills.

Accounts with persons we owe are generally unnecessary. Most merchants furnish either a pass book, in which the account is shown in detail, or an itemized bill is furnished with each purchase. These bills should be pasted in the Bill File and checked off when paid. In the great majority of cases this will prove more satisfactory than ledger accounts.

A special ledger can be provided, or separate pages of the Day Book devoted to special accounts. This classification is made either daily, weekly or monthly, as time and circumstances allow.

CHAPTER IV

MODIFIED DOUBLE ENTRY

Ancient Methods

Not many generations ago it was considered sufficient for the average manufacturer merely to record his cash receipts and expenditures and to keep a tolerable accurate check on the cash balance. In many instances, the left trousers pocket served as the debit side and the right as the credit side of the "Ledger." Modern business methods and sharp competition have changed these notions until today it is necessary to know the cost of production in advance to the smallest detail. Ancient business methods prevail yet, very generally, on the farm. The wonderful progress of the American farmer is due to marvelous natural resources, labor-saving inventions, and natural ingenuity, rather than to wise and prudent management.

Necessity of Careful Management

In certain respects, a farmer must combine the methods of the manufacturer and the merchant. He must learn, not only how to increase production, but also how to facilitate the profitable exchange of his products. He must reduce the cost of production to the minimum by increasing the quality and the quantity of his products, and by getting full value out of labor. He must manage so that his working force, farm hands, children, horses, all, are constantly employed. This requires most skillful management in the rotation of crops, in the division of labor, in selecting seeds, fertilizers and stock; and, above all, it requires general prudence in purchasing equipment and supplies, and in marketing products. Progressive farmers require a variety of records to assist in the proper management of their business. A first-class set of books is just as indispensable to them as to the banker or to the manufacturer.

Superiority of Double Entry

A careful comparison of the results obtained in the last chapter with the balance sheet given on page 39 will convince the reader of the superiority of double entry. It will be ob-

RECEIPTS

April

1908

[illegible]

GENERAL FARM

PAYMENTS

DATE	ITEMS	CASH	TOTAL	HOUSEHOLD, PERSONAL	SEEDS, FERTILIZERS	HIRED LABOR	GEN. EXP. MAINTENANCE	STOCK FEED	IMPLEMENTS	REPAIRS	SHEDDIES
	FORWARDED										
1	Household Expenses	42	30	30							
12	W. Seed Wheat	134	10		10						
3	Labor 1 st , Shearing 3 rd		4.50			1.50	3				
5	Interest, M. & Co	44	20								20
	Jersey Goat	45	65					65			
	Wicks & Shingles	46	3.75							3.75	
6	Garden Seeds		1.60		1.60						
	Head Tax	47	3								3
8	Addition to Barn	48	80							80	
	Grates & Bags	49	18.40				15.40				
9	Wages to Johnson	50	10			10					
	Steel Frame Grand Stone	51	3.50						3.50		
12	200ft. Lumber, 40 per M.		2.00							2.00	
	1 Shovel		1.25						1.25		
13	Household Expenses	52	30	30							
	John Smith 12 days		2.50			2.50					
	Stables		35							35	
14	Taxes	54	30.40								30.40
15	Personal Ex		3.50	3.50							
	1 Rep Saw		2.50						2.50		
	10th to 22nd omitted										
23	Traps & Shrub	60	25.80		25.80						
	Alfalfa Seed		3.20		3.20						
	2 doz. Highhorn Eggs	61	5.80					5.80			
25	Interest on Binder Note	62	2								2
	1 Angora Goat	63	10					10			
	Private Incidentals Ex		5	5							
	6 Gopher Traps		1.50						1.50		
26	Repairs on Horse Stalls	64	13.50							13.50	
	Key Stone Dehorner	65	10.50						10.50		
29	2 Geese		3					3			
	Wages to Johnson	66	10			10					
	Apple Boxes		3.75				3.75				
30	Butter Wrappers		1.75				1.75				
	Life Ins. Premium	67	35.10								35.10
	Produce for Household		18.05	18.05							
	FORWARDED		578.80	116.55	62.00	36.50	30.90	90.90	21.65	114.60	106.30
11	12	13	14	15	16	17	18	19	20	21	22

CASH BOOK

served that the only result obtained by a comparison of inventories was the net profit or loss. The source or causes of these results cannot be obtained by this method. The method suggested in Chapter III has this advantage: There is not a farmer so busy or so ignorant that he cannot adopt it and derive great benefit from its use. But the ambitious, progressive farmer will not be satisfied with this primitive method any more than a wide-awake merchant will be satisfied with single entry bookkeeping. He will adopt a system which will give him at any time reliable information as to his financial standing, cost of production of crops, live stock and poultry, household expenses, etc., and by which he can prove that his work is correct.

Single and Double Entry Compared

The distinction between single and double entry is unimportant for our present purpose, but it may be a satisfaction to the reader to know that the method we are now to consider is double entry in a modified form. The important distinction between the two methods is that in double entry accounts are kept with persons, property, and allowances, while in single entry accounts are kept with persons only. In double entry there is a corresponding debit for every credit; the total debits and credits must, therefore, be equal, and must balance at any time. This becomes clear by referring to the Cash Book below. In the first entry, the amount is entered in both the Total and in the Sundries column; and the same is true of all the succeeding entries. Hence the sum of columns four to ten inclusive must equal the total in column three. You will find the same to be true of the Payments, and of the Household Accounts.

Additional Books Needed

Very important books in double as well as in single entry are the Day Book and the Bill File. They are to be kept in exactly the same way as suggested under single entry, except that no cash entries are recorded in the Day Book, which is kept only as a diary. The important consideration now is to adopt additional records that will furnish the necessary information in systematic and tabular form, and requiring the minimum amount of labor.

The Cash Book

The *Cash Book* is the basis of classification. A very convenient form is given on pages 23 and 24. The special columns take the place of a ledger. All money columns except the total column will be referred to as Distribution Columns. They are in reality separate accounts, and this form might, therefore, properly be called a combined Ledger and Cash Book. The form suggested has the important advantage of being self-balancing. A trial balance can be taken at the end of each page, month or year, as illustrated on page 33. The process of preparing a financial statement becomes extremely simple by this method. A few observation regarding equipment and supplies, improvement and repairs will be of assistance in using the distribution columns.

Equipment and Supplies

In accurate accounting, the question often arises: What shall be considered equipment, and what supplies? Supplies are defined as expendible or consumable materials, which are incapable of being used more than once; while equipment is of more permanent character, articles which can be used repeatedly. Fuel, lubricating oil, cotton waste, feed, etc., are supplies; while machinery, furniture, and apparatus of all kinds are equipment.

Improvement and Repairs

The distinction between improvements and repairs is not always clearly understood. An improvement adds value to the property, in the shape of equipment, buildings, drains, fences, and the like; while repairs merely keep up the property. A coat of paint on an unpainted building is an improvement; repainting is classed under repairs. This distinction is very important in making an inventory. Improvements are added to the inventory, repairs are not.

Cash Balance and Sundry Columns

The cash balance is found as follows:

Total receipts.....	\$653.14
Total payments.....	578.80
Balance.....	\$ 74.34

Note that the totals of columns four to ten equal the total of column three; and that columns fifteen to twenty-two equal column fourteen. The Sundries column contains all entries which do not fall under the special columns. At the end of the year, the items are segregated under various titles. The segregation for the month of April is as follows:

Sundry Receipt Column (10) :

Balance	\$126.04
Labor	10.00
Wood	22.40

Total.....\$158.44

Sundry Payment Column (22) :

Interest	\$ 22.00
Taxes	33.40
Accounts Pay.....	15.80
Insurance	35.10

Total.....\$106.30

Improvements and Repair Column (21) :

Improvements	\$ 80.00
Repairs	34.60

Total.....\$114.60

Trial Balance

In the language of the accountant, a trial balance is a test of the equality of the debits and credits in a set of double entry books. Our trial balance is much simpler; it is simply a test of equality of the total columns and the distribution columns. In the Cash Book, merely add the distribution columns on each side and note that their sum equals the respective total columns. The Household and Shop accounts are balanced in the same manner.

Banking

The enormous increase in bank deposits in rural communities is the best evidence that the farmer is beginning to appreciate the value of better system in his finances. It is claimed that fully ninety-five per cent. of the country's business is done by credit currency, such as checks, drafts, money

FARM RECORDS

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Martin Harris in account with Citizens Nat. Bank					
Date	Year	No.	Payee	Deposits	Checks Bal.
Apr		1	Deposit	58.25	
	1	350	Mrs. Harris		30
		1	Odell Seed Co.		10
					58.35
	3	2	Emma Johnson		1.50
		3	Brown & Pickett		3
			Deposit	70	
	5	4	Salem Implement Co.		20
		5	E. Shidmore		65
		6	Empire Lumber Co.		37.5
	6	7	County Recorder		3
			Deposit	90	
	8	8	Cable & Crockett		80
		9	Farmers' Supply Co.		15.40
	9	360	Frank Johnson		10
		1	Goldard Hardware Co.		3.50
		2	Mrs. Harris		30
			Deposit	40.50	
		3	Canon Fertilizer Co.		6.40
		4	D. H. Smith		15.80
	13		Deposit	125	
		5	County Treasurer		30.40
		6	Kimball Lumber Co.		15
		7	Brown & Pickett		2.50
	20	8	C. J. Olson & Son		15
		9	Hanning & Bacon		10
	23	370	Croford Hardware Co.		10.50
		1	Brown & Pickett		13.30
			Proof:		29.80
			Balance above	29.80	
			Outstanding		
			No. 361	3.50	
			366	15	
			369	10	
			Balance as per Pass Book	58.30	

BANK ACCOUNT

orders, notes, and the like. Many good business men keep only their bank book, and this is far more satisfactory than no bookkeeping at all, especially if bills and receipts are filed for reference. The bank account may be carried entirely independent of all other records.

Banking carries with it many advantages. Important among them are:—

1. The depositor's credit and influence are measured largely by the size and regularity of his bank account.
2. A tendency to economize by a desire to increase the bank balance.
3. The banker becomes your bookkeeper and business counselor.
4. Security against fire and robbers.
5. Indorsed checks are both records and receipts of payments.
6. A benefit to the community by keeping the money in circulation.
7. Convenience in making change.
8. The bank will always loan to a good depositor in preference to one who is not a depositor.

There are only two operations in banking which need discussion here—depositing and checking. The banker will give all necessary directions regarding both, except as to keeping the individual account. This is illustrated on page 27, and will be thoroughly understood after Lesson 5 has been worked out. The special column Cash Book, pages 22 and 23, is an excellent form for keeping the bank account. If all cash is deposited and all payments made by check, the difference between the total columns represents the bank balance. As to deposits, it is preferable to deposit all cash, and then draw out for personal use as needed.

The method of handling checks is as follows: Record the payee, number, the amount, as illustrated under Cash Payments, page 38. The checks are satisfactory receipts, but the itemized bills should be pasted in the Bill File and bear the same number as the checks. The bank will usually furnish all necessary stationery free of charge. The bank balance is considered a part of the cash on hand, so that no special account except the check stubs and pass book need be kept with the bank. The bank balance is proved each month as



1000 BELLEVUE, CORVALLIS, OREGON

S. L. KLINE, PROPRIETOR

A SAFE PLACE TO TRADE

ESTABLISHED
Kline's
1864

CORVALLIS OREGON

WORLD
HONOR
CANADIAN

(34)

SOLD TO Martin Harris, Blodgett, Oregon.

Saturday,
Oct. 3rd,
1908.

Corvallis, Oregon, April 3, 1908 19

M Martin Harris

Wagons,
Plows,
Harvesting Machinery,
Guns & Ammunition
All Kinds of Tools,
Fine Cutlery.

Terms Cash

To R. H. HUSTON, Dr.

SHELF AND HEAVY HARDWARE

Agricultural Implements, Wagons, Carriages, Etc.

STOVES & TINWARE. Plumbing a Specialty.

(35)

Buggies,
Paints and Oils,
Tinneries,
Grasshoppers,
Pumps, Pipes,
Ropes, Etc.

Right pay amt. charged on all overdue accounts.

1	Diamond Hay Carrier		5	00
25	lbs. Manila Hay Rope 1/2"	15/ lb.	5	75
3	Hay Pulleys		75	
1	Hay Fork		1	50

Corvallis, Oregon, July 24 1909

Mr. *Martin Harris*

In account with

O. J. BLACKLEDGE

GENERAL HOUSE FURNISHER

CARPETS, LINOLEUM AND MATTING

(36)

WORKMANSHIP AND REMARKS

July 5 1 Iron bed

" " 1 Spring

" " 1 Mattress

NOTE PROOF

20.00

8.00

10.00

38.00

BILL AND RECEIPT FILE

follows: Arrange the checks returned numerically. List the checks not returned; add the outstanding checks to the balance shown in the check register; the sum should agree with the balance in the pass book. It is often convenient to keep a special check register. Page 27 is a convenient form, showing the method of proving the balance at the bottom of the page.

The Ledger

With a special column cash book, the ledger can be dispensed with in most cases. The further classification of the sundry columns can be done at the end of the year, as illustrated on page 26, and a few pages of the Day Book can be devoted to "What We Owe Others" and "What Others Owe Us." Where a special ledger is found necessary, the form shown on page 18 can be used.

The old style ledger possesses some advantages over any other form. The debit appears on the left and the credit on the right side on the same page. It is used in either double or single entry. The difficulty of keeping the ledger in balance prevents the use of the double entry ledger to a very large extent. This is especially true if an attempt is made to use the ordinary Journal.

Direct entries into either the double or single entry ledger present less difficulties, and the method is recommended where the classification of accounts is such as to make the combined Cash Book and Ledger unpractical. This need scarcely ever be the case, however, because if ruled sheets cannot be obtained without headings, a blank sheet may be ruled with any number of columns and headed with titles to suit. For example, an orchardist would head his Receipt Columns: Apples, Prunes, Peaches, Small Fruits, etc. While an exclusive stock farmer would devote special columns to the different kinds of stock.

The advantage of the ledger method is that each account is more condensed, while the self-proving and labor-saving features are important in the Special Column Cash Book. Preparing a trial balance and balance sheet, and closing the ledger properly, though very simple for the experienced accountant, requires a proficiency in bookkeeping that few farmers possess.

On page 19 is an illustration of the ordinary form of direct-entry ledger, showing the entries for April 1st. Compare these

with the first entries on pages 23 and 24, and note the similarity of results. In the form on page 19 follow the arrows and note that there is a debit for every credit, and vice versa. In the column marked (a) is entered the Day Book page, if the entries have been previously made in that book.

The Voucher System

It is often preferable, especially on a large farm, and in a corporate business, to pay all bills by check. When this plan is followed, it is unnecessary to copy the items, as in the illustration, page 24, but merely to write the name of the payee in the items column. The distribution should be noted on the bill or voucher, and all the vouchers, together with the canceled checks, should be filed in envelopes, properly numbered to correspond with the number of the check. The accounts are fully illustrated on page 38.

Adaptation of This System to Any Business

The foregoing system of accounting can be adapted very readily to any business, and it is especially recommended for a cash business, where the personal accounts are few. Instead of Hay, Grain, etc., the orchardist would head his columns Apples, Pears, etc., while other enterprises would use headings best suited to their business.

Orchard Accounts

On page 38 will be found two illustrations of the voucher system and the proper classification of orchard accounts. The only difference between the two forms is that Form B has a larger distribution of the payments and a smaller distribution of the receipts. Blank forms, No. 14-15 for A, and 16-17 for B, can be secured from the College Bookstore. The Assessment column in Form A, Receipts, is used in a corporate business. The personal accounts can be carried as illustrated on page 18, and the Special Records in Chapter VIII can be modified very readily to suit the needs of any special business. The continued inventory, illustrated on page 16, is recommended.

CHAPTER V

HOUSEHOLD ACCOUNTS

It will be seen that no provision has been made in the General Cash Book for separate items in the household accounts. This is left for the housekeeper. The fact that her field is somewhat limited, from a business point of view, is no argument in favor of loose and careless methods of accounting.

Most housekeepers prefer to receive a fixed allowance for household expenses, whenever it is practicable. For the present purpose we will suppose that the following agreement has been entered into between the farmer and his wife. She is to receive the following:

Monthly Allowances for Household and Personal Expenses

For proprietor and wife.....	\$25.00
Board for hired help.....	15.00
For four children.....	32.00
Sundries	18.00
Total.....	\$90.00

In addition to the cash allowance, vegetables, poultry and dairy products are furnished from the farm at market price. The proprietor gives his wife an allowance of \$90 each month, either in one or in several payments, and enters it in his cash expenditures. His wife, in turn, enters her allowance in her record. Bills for furniture, clothing, and utensils are pasted in a Bill and Receipt File, same as in the Farm Accounts.

Note that the items entered in columns one and two are also entered in columns eight, nine, or ten, since they are purchases from the farm. Because they are entered both as receipts and payments, they do not affect the cash balance.

At the end of the year, the proprietor enters the totals of columns one and two in his cash receipts, under the proper headings, and at the same time they are entered as cash payments in the household column. See page 22, under April 30th. Thus the farm will receive full credit for what it sells to the household as well as to others.

It is suggested that the housekeeper open a private bank account and pay large items by check. See April 13th, 29th

and 30th. There are numerous advantages in keeping a bank account. See page 26. A bill for furniture, utensils, and improvements should always be taken and pasted in the Bill File. It is convenient to number the bills the same as the checks, as suggested in column six. Since endorsement by the payee constitutes receipt, it is generally unnecessary to take receipt when payment is made by check.

Page 34 shows a convenient form of a combined household Cash Book and Ledger. A summary of the receipts and payments is prepared at the end of the year, as shown on page 36.

Trial Balance

Groceries	\$ 13.05
Meat	11.80
Dairy and Poultry.....	12.40
Clothing	16.85
Furniture and Utensils	22.05
Help and Laundry	11.60
Library	6.65
Light and Fuel	6.10
Gifts	2.35
Personal	1.25
Travel and Recreation	3.00
Incidentals	2.65
Physician and Medicine	1.50
Telephone Rental	1.50
Total	\$112.75

The Voucher System

It is often preferable, especially in a large household, to pay all bills by check. When this plan is followed, it is unnecessary to copy the items, as in the illustration, but merely to write the name of the payee in the items column as shown under April 29, Murdock Grocery Company. The distribution should be noted on the bill and all vouchers together with the cancelled check should be filed in envelopes properly numbered to correspond with the number of the check.

See illustration, page 38.

HOUSEHOLD ACCOUNTS

RECEIPTS				DATE	ITEMS
DEBIT	PRODUCE	CASH	TOTAL		
		15.40	15.40		Balance
		30	30		1 City allowance for April
					Shoes for Maple 13.50; 2 hats, 1.00
					10 yds Muslin 1.00; Hyde Langham 60¢
					3 Sugar 1.00; Raisins 25¢
					Sub to L. N. 1.75; to Successful Farming 1.00
					5 Collection 25¢, Ladies Aid Society 25¢
40			40		2 doz Eggs 40¢ (P); Madras 50¢, Stone Polish 10¢
					6 Potatoes 1.00, Ella 25¢, George 50¢, Necktie 25¢
2			2		5 bu Potatoes 2.00; Skillet 50¢
		25	25		5 Cabbage 25¢, Great Kupa 40¢
					Meat 50¢, Parsley 3.00
50			50		9 3 lb Crackers 25¢, Raisins 10¢, Eggs 50¢
					Doris 50¢, Corn starch 10¢, Ketchup 50¢
					12 Collection 35
		30	30		13 City allowance; Rabby 7.00; Coal 5.00
					Prunes 1.00; Vegetables 40¢
40			40		14 Suit for William 6.00; Hat for Geo. 75¢
					Conkers 1.00; 2 yds Ribbon 40¢
					1 doz Plates 2.00; 1 1/2 doz Cups & Saucers 90¢
					15 School Books & Stationery 2.00; Kerosene 75¢
					Navy 1.00; Biscuits 50¢; Soap 10¢
					17 Kitchen Cabinet 6.50; 2 Chairs 1.00
					Laundry 1.00; Toilet Soap 25¢
					3 lb Sugar 45¢; Towel Rack 25¢
					19 Collection
					20 6 yds. Tanseling 60¢; Sack 10¢
					1 gal. Vinegar 30¢; Matches 25¢
					White Mince Cook Book 1.00; Raisins 10¢
					23 10 yds grain 50¢; Telephone Rental 1.00
					2 doz Madras 2.00; Madras & Return 2.00
					25 Biscuits 75¢; Stewings 50¢; Flowers to Market 1.00
		30	30		allowance; Laundry 65¢; Soap 10¢
					26 Collection
					29 City Meat Market
					Mayday Grocery Co.
					30 Help for the month
					Vegetables, not entered
5.40	2.60		2.60		Butter & Eggs
6.50			6.50		Milk, Cream & Butter
12.80	5.25	10.540	12.345		
1	2	3	4	5	

HOUSEHOLD

SUMMARY OF HOUSEHOLD ACCOUNTS

March 31, 1909

Accounts	1909 Jan.	Feb.	March	1908 April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total
RECEIPTS													
Salaries	9 45	8 35	11 10	12 80	8 55	10 65	11 45	9 80	8 55	10 40	11 50	8 40	121 00
Produce	5 35	3 40	2 80	5 25	4 30	6 40	5 80	6 05	5 30	4 60	3 80	4 85	57 90
Cash	90 00	90 00	90 00	105 40	90 00	90 00	90 00	90 00	90 00	90 00	90 00	90 00	1095 40
Total	104 80	101 75	103 90	123 45	102 85	107 05	107 25	105 85	103 75	105 00	105 30	103 35	1274 30
PAYMENTS													
Salaries													
Incidental	1 40	2 40	3 45	2 65	5 30	3 70	2 40	1 05	3 00	1 15	3 20	11 40	43 10
Travel & Re.		1 50	2 00	3 00	1 60			3 20		2 00		5 20	15 50
Personal	1 25	2 80	1 35	1 25	8 00	1 50	2 00	3 40	1 50	2 40	1 50	3 00	29 95
Cash	50	5 00	11 35	2 35	1 25	5 00	6 30	1 50	2 60	75	2	21 40	60 00
Light, Fuel	4 20	3 20	6 20	6 10	3 00	4 70	3 60	7 20		5 50	6 30	5 20	55 20
Liquor	3 75	1 40	2 05	6 65	4 90		3 35		75			9 20	32 05
Help, Laundry	13 80	14 50	17 30	11 60	12 50	12 00	15 20	18 60	13 40	10 50	11 20	12 30	162 90
Furniture, Utensils		18 00	7 60	22 05	1 30		7 40		15 00	3 20		9 60	84 15
Clothing	11 50	20 00	29 00	16 85	7 30	23 25	13 20	7 50	8 40	28 50	5 50	32 40	203 40
Dairy	5 50	5 40	7 20	6 50	4 50	6 00	5 10	6 10	4 45	5 55	6 25	4 65	67 20
Poultry	3 95	4 80	4 65	5 90	4 05	4 65	6 35	3 70	4 10	4 85	5 25	3 75	56 00
Meat	6 30	5 20	13 70	11 80	10 40	11 30	12 70	11 40	8 30	7 20	6 20	10 30	114 80
Grain, etc.	12 35	11 30	12 75	13 05	25 30	16 85	19 30	18 40	15 35	13 40	14 70	19 50	192 25
SPECIAL ACCOUNTS													
Payroll May		75	50	1 50			40		75		2 00	1 50	74 00
Telephone	1 50	1 50	1 50	1 50	1 75	1 50	2 00	1 50	1 50	1 75	1 50	2 00	19 50
Musical Instruments	5 00	5 00							5 00	5 00	5 00	5 00	30 00
Savings Bank	5 00				20 00	8 00		12 00	5 00	15 00	20 00		85 00
Balance													12 90
Total	71 00	107 75	112 60	112 75	101 15	98 40	99 20	95 55	89 10	104 75	90 60	156 40	1274 30

NOTE—The items in the "Salaries" and "Incidental" Columns may be reclassified under "Special Accounts."

SUMMARY OF HOUSEHOLD ACCOUNTS

CHAPTER VI

THE ANNUAL STATEMENT.

The annual statement exhibits in a condensed form the financial operations for a given period. It shows the resources and liabilities, the cash receipts and expenditures, the profits and losses, the net profit or loss, and the net worth. It enables the proprietor to analyze his business with considerable accuracy and to trace the sources of profits and losses. There are various forms of statements, but the illustration on page 39 seems best suited to the farming business. Statement No. 3 shows the results of a month's business only. The inventories are obtained from separate schedules and the cash receipts and expenditures are the totals found in the Cash Book.

The revenue accounts, or the accounts showing profit or loss, are fully analyzed on page 40. This is wholly independent of the other records. Three or four of the principal enterprises may be analyzed, as in the illustration, or the statement may go into greater detail to suit the condition of the business. Individual cost accounts are illustrated on page 43.

The method of preparing these accounts is as follows: Take the Grain account for example. We debit it with all the items that enter into the cost of its production, and credit it with the returns. The first item of cost in last year's inventory Financial Statement No. 2; Lesson 4), is \$377.86; Labor (Horse and Man, from Labor Record), \$440.00; Interest on the value of Land devoted to Grain (56 acres @ \$55.00 per acre), 6 per cent., \$184.80; Seeds and Fertilizers (Cash Payments), \$129.71. The returns are: Present Inventory, \$380.00; Cash Receipts, \$712.43; Fed to Stock (Feed Record assumed), \$770.07; Fed to Poultry, \$50.00. From this we obtain the net profit, \$780.13.

In a similar manner we consider the Stock account and the Hay account. The illustrations, pages 39 and 40, show the figures supplied from each account.

It should be borne in mind that this exercise in cost accounting is only suggestive. The principles are fundamental and correct, but their application in practice may vary greatly.

THE BUSINESS SIDE OF FARMING

[illegible][illegible]

Thus, some farmers will charge live stock a certain amount for housing, perhaps also for the use of utensils, machinery, and the like; others will insist on deducting the cost and care of the dwelling from the annual farm inventory, since this is not capital invested in the business. For a full discussion of this subject, see Bulletin 73, Bureau of Statistics, U. S. Department of Agriculture.

Financial Statement, Year Ending March 31, 1910

Cash Receipts and Payments

RECEIPTS		PAYMENTS	
Grain	\$ 712.43	Household and Personal	\$ 1152.80
Hay	120.20	Seeds and Fertilizers	123.71
Orchard and Garden	13.85	Hired Labor	435.09
Stock	13.85	General Expense and Marketing	228.20
Dairy	19.18	Stock and Feed	225.76
Poultry	26.13	Improvements	350.00
Sundries (itemize below)	3.42	Repairs	174.40
		Sundries (itemize below)	699.32
<i>Del. 1/25</i>	<i>126.04</i>	<i>Life Insurance</i>	<i>54.30</i>
<i>Imp. 1/25</i>	<i>68.81</i>	<i>Insurance (a)</i>	<i>272.52</i>
<i>Hired Labor</i>	<i>153.15</i>	<i>Insurance</i>	<i>336.01</i>
	<i>342.90</i>	<i>Life</i>	<i>94.60</i>
		<i>Insurance</i>	<i>29.50</i>
			<i>699.32</i>
Total	\$ 4173.24	Balance on hand (b)	271.96
		Total	\$ 4174.24

Resource and Liabilities

RESOURCES		LIABILITIES	
Farm (market value)	\$ 927.00	Hired Labor	\$ 35.00
Cash and Bank, as above	272.52	Bills Payable	122.00
Life Insurance, paid up value	192.52	Accounts Payable	79.00
Stock (a)	13.85	Gifts	79.00
Grain (a)	13.85		
Hay (a)	120.20		
Orchard and Garden (a)	6.41		
Dairy Products (a)	19.18		
Poultry (a)	26.13		
Improvements (a)	350.00		
Household Goods (a)	62.40		
General Supplies (a)	37.90		
Total	\$ 4794.76	Net worth	\$ 4142.96
		Total	\$ 4794.76

(a) As per Inventory. (b) Difference between Receipts and Payments.

Statement of Profit and Loss

Net worth as above	\$ 4142.96
Net worth last year (a)	1033.41
Gain for the year	\$ 1094.76
Less interest on investment, 4% X	375.93
Net earnings	\$ 718.83

x on \$6265.64, see pages 55 and 16

GENERAL BALANCE SHEET

THE BUSINESS SIDE OF FARMING

Accounts Showing Profit or Loss, Year Ending March 31, 1910.

(Amounts are taken from Inventories, Cash Book, and Special Records.)

GRAIN

COGS.		RETURNS.	
Inventory last year	\$ 377.86	Present Inventory	\$ 380.43
Less: Inventory	440.00	Receipts from Sales	712.43
Interest on Value of Land	182.80	Fed to Stock	720.07
Seed & Fertilizers, Cash	129.71	Fed to Poultry	50.00
Net Profit	780.13		
Total	\$1912.50	Total	\$1912.50

STOCK

Cost		Returns.	
Inventory last year	\$1966	Present Inventory	\$1948.50
Labor	385	Receipts from Sales	1399
Grain	1720	Receipts from Dairy	1918.12
Hay	1498.87	Labor (Cash Receipts)	155.15
Interest on Inventory last year	117.96		
Pasturage on Land	135		
Bank	445.20		
Net Profit	452.74		
Total	\$4421.77	Total	\$4421.77

ORCHARD AND GARDEN

COST.		RETURNS.	
Inventory last year	\$.....	Present Inventory	\$.....
Label and Marketing		Receipts	
Interest on Land			
Net Profit			
Total	\$.....	Total	\$.....

HAY

Cost.		Returns.	
Inventory last year.....	\$ 139	Present Inventory.....	\$ 242
Labor.....	23	Receipts.....	80
Interest on Land.....		Fed to Stock.....	
Net Profit.....	298 75		
Total.....	\$ 522 75	Total.....	322

(Account).....

[illegible]

GENERAL BALANCE SHEET

CHAPTER VII

COST OF PRODUCTION

Too often a good farm is compelled to carry unprofitable experiments and the whole business is pronounced a failure without an adequate attempt to find a remedy. In addition to the foregoing records, Mr. Harris has kept accurate cost accounts of the main branches of his business. In cost accounting there are four principal elements to consider: Cost of material, labor, interest, and depreciation. The cost records are independent of all the rest and may be kept of every branch of the business, if desired, or limited to one or more phases. In this instance, cost records have been kept of Live Stock, Grain, Hay, Dairy Products and Improvements. The Agricultural Experiment Stations are always willing to give the farmer important advice and assistance regarding the stock, grain, fruit, etc., best adapted for different localities and purposes. But conditions frequently arise where it is important for the farmer to carry on his own experiments. Your own Experiment Station will doubtless be glad to co-operate and suggest methods for carrying on such experiments even to the extent of furnishing necessary blanks and material. Important bulletins on the subject may be had for the asking from the Department of Agriculture, Washington, D. C. :

The following announcement in the Crop Reporter for May, 1908, indicates what the government is doing in this direction :

Cost of Producing Farm Products

"The Bureau of Statistics is making an investigation of the cost of producing farm products in different parts of the United States. Blank forms have been printed upon which to make reports, and this Bureau desires to receive the names of such farmers as have kept records of cost of producing crops, or are well informed upon the subject of cost of crop production in their locality, in order that blank schedules may be sent to them to fill in. Individual reports will not be published—only the average of many reports. Names should be sent to the Bureau of Statistics, Department of Agriculture, Washington, D. C."

Every farmer should avail himself of this important free service. "Keeping posted" is one of the characteristics of the progressive and successful farmer. There are two exceptionally valuable bulletins on the subject which ought to be in the library of every farmer: U. S. Department of Agriculture, Bureau of Statistics, Bulletin No. 48, and University of Minnesota, Agri. Ex. Station, Bulletin No. 97.

Live Stock

Either of three methods may be employed in finding the cost of live stock.

First Method. Ascertain exactly the total amount of grain, hay, and roughage on hand at the beginning of the year, and produced during the year. From this subtract the quantity sold, including amount used by the household and for seed, and the amount on hand at the end of the year. The difference is the quantity used for live stock. The value at market prices is the expenditures of feed for live stock.

Find the total amount received for dairy products, including amount used by the household. The difference between the cost and the receipts is the gain. The disadvantage of this method is that no account is taken of individual animals nor of different kinds of stock. The herd as a whole may be a paying investment and still there may be individual animals carried at a loss. It is desirable that such records be kept, at least occasionally, as will enable the farmer to eliminate unprofitable animals.

Second Method. The following actual record of a dairy herd of twelve cows illustrates a much more satisfactory test than the preceding. Individual record was kept of the milk produced by each cow, but the feed was weighed for the entire herd, and the average cost charged to each animal at market prices.

With this average before him, a careful feeder will be able to make mental corrections for each individual animal, accurate enough for most practical purposes. The milk record has been kept, as illustrated on page 49

Pearl (Dairy Cow)					
1908					
Apr 1	Market value at year's age	50	Apr 1	Value given	45
	Feed for the year	42.30		Milk produced	67.50
	Carb	4		Cash	5-
	Depreciating	50			
	Doctor	2			
	Interest on \$50.00	3.50			
	Incidental	2			
	Net Gain	13.20			
		117.50			117.50

Wheat					
20 ac. 5th Crop					
1908					
Apr 1	Value of land at year's age	1100	Apr 1	Value of land now (less 2 1/2% for over	1078
	Interest 7%	77		Cropland	
	Labor & Transport	63		418 bu wheat @ 75¢	313.50
	Seed, 3 1/2 bu.	30		Straw	15
	Threshing	29.25			
	Marketing	8			
	Fertilizers				
	Net Gain	89.25			
		1406.50			1406.50

COST ACCOUNTS

Test of Dairy Herd for March, 1909

No. Cow.	Lbs. Milk for Mo.	*Test.	Lbs. Fat.	Val. at 36c.	Cost of Feed.	Net Profit.
1.	465	4.5	20.93	\$ 7.53	\$6.21	\$1.32
2.	372	5.0	18.60	6.70	"	.49
3.	620	5.0	31.00	11.16	"	4.95
4.	372	7.0	26.04	9.37	"	3.16
5.	496	4.8	23.80	8.57	"	2.36
6.	682	4.7	32.05	11.54	"	5.33
7.	558	4.4	24.55	8.44	"	2.23
8.	620	4.1	25.42	9.15	"	2.94
9.	496	4.2	20.83	7.50	"	1.29
10.	651	4.9	31.90	11.48	"	5.27
11.	558	5.0	27.90	10.04	"	3.83
12.	589	5.0	29.45	10.60	"	4.39

*These figures were obtained by the Babcock test, which is described in every modern work on dairying.

Feed for the Month of March

Hay, 4,900 lbs. at \$9.00 per ton.....	\$22.05
Kale, 9,600 lbs. at \$2.50 per ton.....	12.00
Bran, 1,800 lbs. at \$30.00 per ton.....	27.00
Shorts, 900 lbs. at \$30.00 per ton.....	13.50

Total\$74.55

74.55 divided by 12 equals 6.21, average cost of feed.

Third Method. The difference between the second and third methods is that in the latter accurate records are kept of individual feed rations, while in the second method an average is taken. The error resulting from averaging the feed between all the animals in a large herd may be such as to unduly favor certain animals and do injustice to others. The only absolutely accurate method is to keep an account with each animal; at least with such animals as show a tendency to be unprofitable. Page 43 shows an individual account with one of the milch cows on the Harris farm. It is arranged on the regular Ledger form. Opposite pages of the Day Book may also be used. The detailed information regarding Feed, Milk, Labor, etc., is found in the respective records, illustrated on pages 49 and 50 respectively. Similar accounts are kept of each animal, tested preferably during the entire lactation

period. It is only in this way that the careful farmer can determine whether each animal is kept at a gain or a loss. The weeding out of one or two unprofitable animals a year will pay for the labor of keeping the cost records many times over.

Cost of Crops

The principles laid down in respect to the cost of animal products hold true also for the cost of farm crops. Two methods suggest themselves. Accounts with the various crops and accounts with the different fields. Either method requires detailed records of the labor, seed, fertilizer, etc., expended on the crop and of returns not only for cash sales, but for products used by the household and for feed. On page 43 is illustrated an account with the wheat crop in 1908. Only one item needs explanation, that of depreciation, due to continuous cropping. Whether the rate, two per cent, is too high or too low, matters little; the important point to be emphasized is that the value of the land diminishes unless rotation of crops is practiced.

CHAPTER VIII

SPECIAL RECORDS.

There are several convenient special records which ought to be adopted, besides those I have illustrated. It is not necessary that expensive printed books be provided. A plain sheet of paper may be ruled as suggested below and pasted in the Bill File. In fact, this is in many respects preferable to printed forms, because the forms can then be changed from year to year to suit conditions.

Labor Records

The best form of labor record is illustrated on pages 49 and 50. In one, account is kept with the object upon which labor is expended; in the other, with the laborer. For ordinary purposes, page 49 is the most convenient, but where several men are engaged on a project, form (a), page 51, is preferable.

Where the loose leaf book is used it is convenient to tack a sheet to a board, and hang it in a convenient place until it is filled, when it may be filed permanently. See illustration, page 53.

Milk Records

Two milk records are illustrated on pages 49 and 51. Each possesses certain advantages over the other. The weekly record need not be so large and admits of larger spaces, while the monthly record exhibits the entire month's result on a single page. The weekly record is more appropriate for filing, being less liable to soiling. Whichever form is used, it should be tacked to a board in a convenient place for the milker. A spring scale, graduated to hundredths, should be hung near the record, far enough from the wall for the pail to hang freely. The original records should be filed for at least a year. If a daily time book is kept, it may also be adapted for the milk and poultry records.

Poultry Records

Practically the same form as the milk record can be used conveniently for the Egg record, and it is not deemed necessary to enlarge further on the subject.

FARM RECORDS

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The methods of improving the poultry stock, and other full information regarding the poultry business, is found in numerous books and bulletins on the subject.

Duplicating Sales Book

It is often convenient to retain a duplicate of sales, orders, receipts, etc. It will be found very helpful to the farmer and to the dealer alike, if the farmer prepares a bill of the produce he brings into town for sale. This will often avoid misunderstanding and may save money. This is especially true if the produce is sent in by children or by someone not connected with the family. On page 51 is illustrated a very convenient book which is kept in stock in most stationery stores. Where this system is used, it is advisable that *every* sale be recorded, and then listed as shown on page 50. In entering in the Cash Book, the sale number should be inserted. All sales to merchants should be considered as cash, even if the produce is exchanged for merchandise. If sales are made on time, note the fact on the bill, and enter it into the personal account as illustrated on page 18.

The Farm Plot

There is one more record which I cannot urge too strongly. I refer to the yearly plots. This record will prove to be one of the most valuable and interesting parts of the farm history. A plot is easily made by first drawing a square on a blank piece of paper and then sketching the fields. It is, of course, unnecessary to draw this to scale. A close approximation is all that is necessary. Below is an illustration.

The Farm Office

Talk about an office on the farm! Why not? Why should not the average farmer enjoy at least a comfortable desk and neatly printed stationery? Every boy loves "to do business." Surround him with a business atmosphere on the homestead and he will stay by you and succeed you in your old age; continue in your slipshod methods and he will move to town and become a cheap clerk instead of a landed proprietor. Encourage your children to assist in your business; make them feel that they are intimately associated with you; take them into your confidence and, as they grow older, into your counsel,

especially when you are considering your annual balance sheet and a greater prosperity, wider influence, and a more contented family will be your reward.

A very convenient desk is illustrated on page 6. Besides the usual drawers, pigeon holes, etc., it contains a fire proof safe which affords ample protection against fire and burglars. It is built especially for farmers by The J. K. Gill Company, Portland, Oregon, at a very moderate price.

49

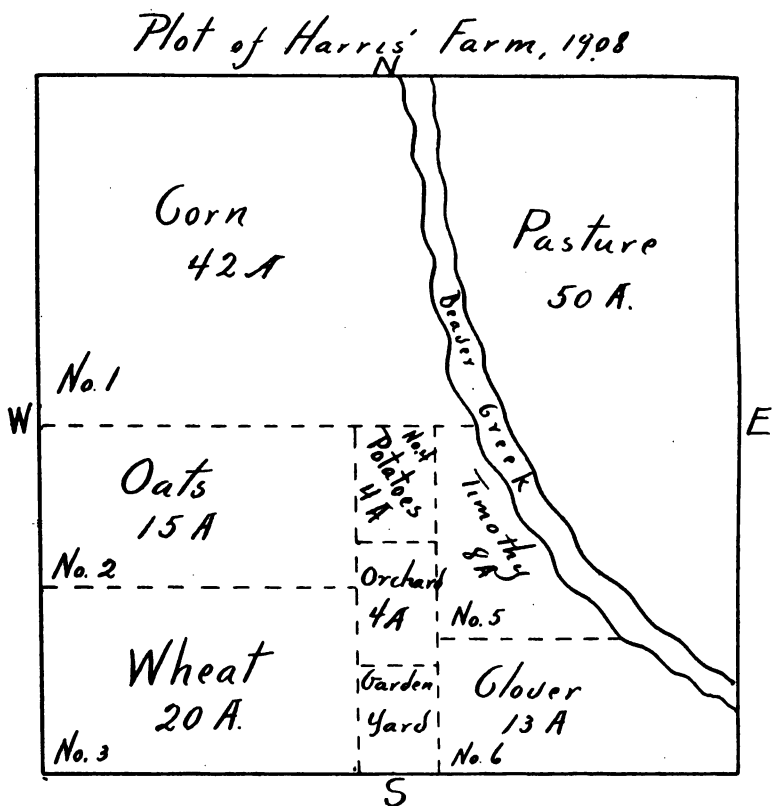
Week ending June 5 1949

(2) Feed Record, Dairy Cows, June, 1909

125 pounds, \$30.00 per ton; 135 pounds per ton \$2.50 per ton

(4) Daily Labor Record, June, 1909

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THE FARM PLOT

FARM RECORDS

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DAILY LABOR RECORD, Month Ending *May 31* 1910

DAY OF THE WEEK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Per Day	Per Week	Per Month
Orchard					5					2																						6.15	40	
Corn					9	9	9	9																								36.30	1870	M.T.
Live Stock														4																		12.30	360	"
Improvements					4					4																						13.15	195	
Machinery & Impl.					2																											7.15	105	
Wheat					9	9																										36.30	1080	M.T.
Onions					9	9																										21.15	360	
Potatoes																																20.30	600	M.T.
Hay										3	6																					10.30	420	"
Oats																																9.47	3430	1020
																																		5270

FEED RECORD

Kind of Stock *Dairy Cows* Week Ending *May 31* 1910

NAME	DATE TO BE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	TOTAL
800 Katey	4.60	4.63	3.63	4.65	4.60	3.62	4.60	27.63	
975 Ruthie	8.80	8.80	8.80	8.80	8.70	9.82	7.81	56.53	
1400 Meg	6.92	6.92	6.92	6.92	6.92	6.92	6.92	42.64	
1200 Lady	8.90	8.90	8.90	8.90	8.90	8.90	8.90	56.60	
830 Daphne	4.68	4.68	4.68	4.68	4.68	4.68	4.68	28.46	
1400 Elanor	7.10	6.100	7.110	7.110	6.100	6.100	7.110	46.760	
950 Pat	7.80	7.80	7.80	7.83	7.83	7.83	7.83	49.572	
1000 Bea	6.86	6.86	6.86	6.86	6.86	6.86	6.86	42.602	
1270 Cynthia	8.100	8.100	8.100	8.100	8.100	8.100	8.100	56.700	
850 May	5.65	5.65	5.65	5.65	4.60	4.60	4.60	32.466	
900 Nellie	6.70	6.70	6.70	6.70	6.70	6.70	6.70	42.490	
1375 Alta	8.100	8.100	8.100	8.100	8.100	8.100	8.100	56.700	
1050 Ruby	24 4.4225	4.4323	5.4524	4.4225	4.4325	4.4523	5.4523	169.31305	
1300 Pauline	27 6.4527	6.4527	6.4527	6.4527	6.4527	6.4527	6.4527	42.315	
1350 Princess	30 7.4830	7.4830	7.4830	7.4830	7.4830	7.4830	7.4830	44.316	
Bonds									

MILK AND LABOR RECORD

TO VINU ABBOGLIAO

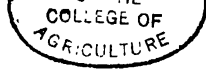
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OREGON AGRICULTURAL COLLEGE

THE BUSINESS SIDE OF FARMING

**PART II
PRACTICAL PROBLEMS IN RURAL ECONOMICS**

**BY
HECTOR MACPHERSON, Ph. D.,**

**Professor of Economics
School of Commerce**

UNIV. OF
CALIFORNIA

COLLEGE BULLETIN

ISSUED MONTHLY

SERIAL NUMBER 71

**Entered at the postoffice, Corvallis, Oregon, as second-class matter
under Act of Congress, July 16, 1894**

General Acknowledgment.

The investigation on which this bulletin is based covered a much broader scope than the outline presented here would indicate. Many who have contributed liberally toward that investigation, in both material and suggestions, may be disappointed that no apparent use has been made of their contributions. To all such we may say, that we trust the end is not yet. We desire here to express our appreciation of the way in which hundreds of busy men and women have responded to the appeal for help in making our work here more effective. We assure them, that even if no other use should be made of the material collected, it has been abundantly worth while from the added interest it has lent to our college work.

TO THE
LIBRARY

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UNIV. OF
CALIFORNIA

TO THE
ABBOT

INTRODUCTION.

The title under which Part II of this series of bulletins on "The Business Side of Farming" is offered to the people of Oregon, implies a subject matter indefinitely expansible. Part I on "Farm Records," by J. A. Bexell, Dean of the School of Commerce, was a pioneer in its field. That it met a real need, was evidenced not only by the fact that within six months a second edition was called for, but also by the growing interest in this field of investigation throughout the country. Within the past year and a half, few subjects have received more attention than the business side of agriculture.

This issue again marks, to some extent, a new departure in the subject matter of college bulletins; and hence, must be regarded as tentative. Should it prove to meet a real need, it is hoped that other "Practical Economic Problems" may be discussed in subsequent bulletins of this series. Among the urgent economic questions before the American farmer today, are the Need of Better Rural Credit Facilities, Cheap and Safe Agricultural Insurance, More Equitable Methods of Taxing Farm Property, and the Transportation of Agricultural Products, including carriage by water, rail, and public highways.

It is the aim of the School of Commerce of the Agricultural College to extend its discussion of The Business Side of Farming to include a treatment of all these topics, in addition to Part III on "Rural Law," which is now in course of preparation. Many other subjects may be added to the list as time and means are available.

The keynote of this whole series of bulletins may be very briefly expressed. It is, in a word, better education and more thorough organization for the American farmer. In this message there is, to be sure, nothing strange or new. Yet it certainly needs repeating and reinterpreting until it has found expression in new life pulsating through our rural communities from the Atlantic to the Pacific. We have scarcely made a beginning as yet toward the building up of a rural idealism

such as is fundamental to the solution of all agricultural problems.

This conviction was borne in upon the writer while still a student, specializing in Economics and Sociology in German Universities. He there became acquainted with the low interest rates, the economies in producing and marketing farm products, and the savings in the purchase of farm supplies, which have been achieved by the organization of German agriculture. The efficiency thus attained stands out in sharp contrast to the extravagance and waste of American agricultural business methods. He was also struck by the esteem in which education is held by the small farmers of Denmark. The sacrifices so often undergone by these peasants in order to secure an all-round cultural training, brings a blush of shame to our cheek, when we remember that seventy-five per cent of our farm boys and girls leave school before having completed the sixth grade. We believe that the interest of the Danish farmers in education is largely due to their extremely democratic forms of agricultural organization. Every farmer bears the responsibility of membership in several self-governing societies for mutual improvement. This sense of responsibility is the spur to self-development which makes the Dane look upon ignorance as a disgrace.

Few sections of the United States are more enterprising and progressive than the Pacific Northwest. No section shows more inclination to acquire the advantages of fuller agricultural organization. Repeated requests for information and guidance have been presented to this college. For the past three years, in consequence, the School of Commerce has been preparing to meet the demand, voiced by many of our most prominent rural leaders, for instruction in the economic problems of agriculture.

As a result, an immense amount of material has been collected. The field force in charge of the "Preliminary Agricultural Survey," conducted during the past summer by the Oregon State Immigration Commission through the Agricultural College, covered every county in the State. The questionnaires, as well as the community reports required of all the field men,

were especially designed to secure the fullest information possible regarding social and economic conditions among the farmers of the state. Alongside of this material, we have placed the results of rural surveys and investigations by Country Life Commissions in other states. In addition, the correspondence and questionnaire method has been persisted in until we have accumulated a large body of first hand facts, suggestions, and opinions from prominent educators and rural life workers in every state in the Union, as well as in most of the Canadian provinces.

Through our Extension Department, and by means of bulletins, the results of this investigation will be placed at the command of every rural community in the State of Oregon.

CHAPTER I

THE ECONOMIC PROBLEMS OF AGRICULTURAL PRODUCTION.

THE VERSATILITY DEMANDED OF THE PROGRESSIVE FARMER: Every progressive farmer should be satisfied with nothing short of success,—all-round, honest, well-earned success. But if he is to win this coveted prize, he must be ready to pay the price, which is constant attention to a multitude of details. His vigilance, like that of the Roman god Janus, the double-faced, must be constantly scanning the pathway of progress, both behind and before. He must learn to profit by the lessons of the past, act wisely in the present, and plan sanely and progressively for the future. Like the hundred-eyed Argus, also, who slept with but two eyes shut at a time, he must ever be on guard against the thousand and one enemies lying in wait to steal away his treasures.

Briefly, we may recount some of the larger claims upon the attention of agriculturists.

1. At the foundation of all permanent agriculture is the conservation and up-building of the soil. This includes a well-balanced fertility and prime physical condition. Equally fundamental, is the constant fighting of weeds, insects and plant and animal diseases.

2. Then there comes for the general farmer the care of the different crops, the selection of the best varieties of seed, the planning of the crop rotation best suited to his conditions, the careful cultivation required by each, and the proper curing and storing of grain, tobacco, cotton, hay, and other feeding stuffs.

3. The dairyman must face the problems of economical feeding, and of improving the dairy herd by getting pure-bred sires of known milk and butter producing ancestry, and breeding them to those members of his herd which have shown themselves the highest producers of milk and butter fat. Then

comes the sanitary handling of milk and cream, and the scientific production of butter and cheese. The beef-raising stockman must breed and feed for economical beef production instead of milk and butter fat.

4. The poultryman, in the long run, must aim at producing power rather than feathers in his breeding experiments. Of course, all will depend upon what the market demands. If feathers pay the best, then let him breed for feathers; if he expects to sell eggs, he should select the hens producing the largest number of the best eggs per year; or if his aim is to supply marketable fowl, he should select varieties which turn feed into flesh, rather than eggs. Finally, he must give strict attention to the quality of the product he offers in the market. The eggs must be fresh, clean, and carefully graded as to size and color; and the dressed fowl must also be clean and attractive.

5. Back of the successful market garden lies the scientific treatment of the soil, and constant care of the growing crops. Then, there must be careful picking, washing, grading, packing, and storage, if the product is to arrive in fresh, attractive condition before the prospective buyer.

6. The fruit-grower must give his first attention to the selection of varieties which are best adapted to the soil and climate; and which, at the same time, supply the demands of his available markets. Having gotten thus far, the growing vine, bush or tree demands his constant scientific care until its fruit is mature. Then follows the most careful picking, sorting, grading, packing, pre-cooling and storage, preparatory to placing the fruit on the market in perfect condition.

7. But all of these details may have been attended to and the farmer still obtain less than half the reward which should be his as a result of his toil. It is estimated that the six and a half million farmers of the United States receive only from 40 to 50 per cent of the wealth they annually produce. All the rest is swallowed up as a result of poor business methods. It is with the elimination of this tremendous waste that this bulletin is concerned.

THE ECONOMIST'S INTEREST IN BETTER FARM METHODS:
It is not our purpose in this chapter to attempt a treatment of

the technical problems of agricultural production. These problems, to be sure, are of tremendous economic importance; but their solution belongs to other departments of this college. Every farmer in the state should be in touch with the work of his agricultural college, and systematically try to practise the economies for which it stands.

He should learn to get rid of dairy cows which do not produce enough annually to pay for their feed. There are probably between 10,000,000 and 12,000,000 such cows in the United States, which are being fed and milked "just for the fun of it," as the writer once heard a well known Illinois dairyman express it. He had long taken great pride in his registered herd of eighty Guernsey cows. He hadn't much faith in the new-fangled ideas of the college-bred farmer, until one day he was visited by a representative of the state university, who persuaded him to try out his herd with a Babcock tester and pair of scales. Imagine his dismay on finding that about a quarter of his cows were being kept at a loss! Another quarter of the herd was barely paying the cost of feed and labor; while upon the other half of the cows fell the burden of whatever profit was being made by the dairy.

If you have never tested your cows, the probabilities are, Mr. Dairyman, that your herd contains a larger percentage of unprofitable cows than this one did. Your problem is to get rid of those cows. Your agricultural college is anxious to help you to give up working for nothing. You wouldn't do it if you knew it, and you ought to know that you are doing it every day.

Your aim should be the maximum net profit from all the effort put forth. If you are in the dairy business, the best milkers and butter fat producers are none too good for you. If you raise beef cattle, they should be the kind which can put on the most and best beef from the feed consumed. If you keep hens, they should lay two hundreds eggs each or more per year. Fifty-egg hens do not pay for the grain they eat. Then, too, some varieties of seed and certain kinds of fruit are much better adapted to your conditions than others. These are problems of production which your college can help you to solve. They are problems which you must solve if your farm is to

pay as a business proposition. In Oregon agriculture, you ought to be clearing at least six per cent on your investment in addition to fair wages. A great many of our farmers are not doing that. If you are one of them, you should make use of your college to find out what is wrong. That is what it is here for, and you are helping to pay for it. If you make no use of it, you are not getting your money's worth.

THE PROBLEMS OF THIS BULLETIN: In this discussion, we take it for granted that each farmer knows how to get the largest product per acre from the working of his farm. He finds, however, that business difficulties prevent his attaining the largest net returns from his expenditure of capital and labor. It is with these obstacles that we are here especially concerned.

THE LAW OF DIMINISHING RETURNS: The fundamental problem of all agriculture is the economic problem of getting the most out of the investment. This is a very different question from that of growing the biggest crops. It involves a frank recognition of the fact that the highest yield per acre of the best producers, or the biggest flow of the best milk, or the largest, fattest steer may be produced at a cost which leaves little profit for the farmer. This has probably been more or less dimly understood since ever there was such a thing as intensive agriculture.

But it was only during the period of high protection under the English Corn Laws that its full significance was grasped. Old lands were cultivated more intensively, and poorer lands were brought under cultivation, until intelligent farmers and economists saw that agriculture is subject to what is called the *law of diminishing returns*. This means, in brief, that if we keep on expending more labor and capital on a given piece of land there will come a point where the profit on each additional expenditure will begin to diminish; and will continue to decrease until the farmer is producing at a loss. This takes it for granted, of course, that the kind of crops grown, and the marketing conditions remain unchanged throughout the period. The law can be best understood from the following table of results from the worlds' oldest experiment station, at

Rothmsted, England, found in Hopkins' "Soil Fertility and permanent Agriculture," page 374:

Table 63. Wheat Yields on Broadbalk Field, Rothamsted.

Thirteen Years' Average, 1852-1864.

Plot No.	Soil Treatment Applied Every Year.	Nitrogen per acre, lbs.....	Total salts per acre, lbs.....	Wheat per acre, bu.....	Straw per acre, lbs.....
5	Minerals (P, K, Mg, Na, S.)	None	792	18.3	1,862
6	Minerals & ammonium salts.	43	992	28.6	3,038
7	Minerals & ammonium salts	86	1,192	37.1	4,270
8	Minerals & ammonium salts.	129	1,392	39.0	4,788
16	Minerals & ammonium salts.	172	1,592	39.5	5,222

In these experiments, lasting thirteen consecutive years, the first and second applications of fertilizer produced almost equal increases in the yield of wheat. Beyond that point, the yield increased very little for the extra additions of 43 pounds of nitrogen and 200 pounds of salts. Beyond the second application, our law began to operate, and returns decreased rapidly.

The law of diminishing returns presents the great obstacle to increasing indefinitely the yield in agricultural production. It has hardly presented itself to us yet as a serious problem in American agriculture. Our farming is still predominantly extensive rather than intensive. In the Old World it is different. On the small farms of Ireland and Scotland, for example, and in the little truck gardens around Paris, crops are produced at tremendous cost, especially in human drudgery. Even under present American conditions, however, no one can farm intelligently, or even rent a farm to the best advantage, who does not recognize the operation of this law, and govern his business accordingly.

Let us take an illustration or two from Oregon conditions. Apple production has been tremendously stimulated by the high prices of the past few years. It has also been possible to carry apple culture to a degree of intensiveness, found, perhaps, nowhere else in the world. But what if the

days of bonanza prices for apples are numbered? Let us hope they are not; but it is a question every grower ought to face. At any rate, it is clear that at this season's prices for apples, orchards have been cared for at cost which is beyond the point where the law of diminishing returns comes into operation.

Even with the best of prices, the operation of the law must be studied. The question must be faced: How many times can I spray? How often can I cultivate? What expenditure for machinery can I afford? Such questions are all of the greatest importance if the grower is to obtain the greatest net profit on his outlay. He may often find that a crop yielding 85 per cent of good marketable fruit is more profitable than a 95 per cent saleable crop, when he counts the cost of securing the last ten per cent.

Again, take the farmer in our Eastern Oregon wheat belt. At every improvement in his equipment, he is face to face with the law of diminishing returns. Will it pay, for example, to invest in a caterpillar engine? The whole question turns on whether or not it will increase his net profit. Will interest on the investment, and the depreciation of the machine through wear and age, more than offset the advantage it brings?

Exactly the same problem must be threshed out by the dairyman who thinks of installing a system of milking machines. In fact, no up-to-date farmer can get away from the law of diminishing returns. Its operation accounts for the fact that wealthy men who take to farming as a recreation, usually find it an expensive hobby. They adopt the most expensive methods and equipment, and seldom make interest on their investment.

In most sections of the Northwest, however, there is little danger of loss from over-intensive cultivation as yet. Indeed, it is probable that a large percentage of farmers are land poor as far as making money from agriculture is concerned. That is, they are spreading their efforts over too much ground. A very little figuring will show that the farmer who can grow 40 bushels of wheat per acre by cultivating only 40 acres of land, is probably better off at the end of the year than

the man who spreads his energy over 80 acres and raises only 20 bushels of wheat per acre.

The maddening thing about the operation of this law is that neither the economist nor the experiment station expert can ever formulate any ready-made solution for the problems to which it gives rise. This is because of the fact that it affects every locality, and even each individual farmer, differently. Peculiarities of soil, climate, marketing conditions, and the ability of the agriculturist, are all factors in determining at what point the law of diminishing returns will begin to operate. Hence, the most that the expert can do for the farmer, is to make him thoroughly acquainted with the general working of the law, and then leave him to apply it to his own peculiar conditions.

There are, however, certain suggestions by which every farmer may profit in solving his problems. First and foremost, we must place the keeping of farm records. Without a system of bookkeeping which shows accurately the cost of producing different commodities, and places over against that cost the value of the resulting products, no farmer can know whether his returns are increasing or diminishing. The student will find instruction in the problems of farm bookkeeping in Part I of this series of bulletins, from the pen of Dean J. A. Bexell.

Guided by his system of records, the farmer should watch for every opportunity of economically increasing the quantity and improving the quality of his product. He should study methods of economical marketing and purchase of supplies. Of equal importance are such problems as cheap and efficient transportation by road, rail and water; equitable taxation; a safe and elastic currency; and the establishment of a system of rural banks and mortgage loan associations, through which the farmer can obtain the credit he needs at reasonable rates of interest.

Owing to the limitations of this bulletin, we must confine our discussion to the problems of Production, Marketing, and the Purchase of Farm Supplies. Wherever we can show the possibility of saving in any one of these departments, through better business methods, we present at the same time

a means of modifying the action of the Law of Diminishing Returns.

GETTING THE BEST RESULTS IN DAIRYING: Most dairymen know that poor cows do not pay. But they have no accurate idea as to which are the poorest members in their herds. Nor do they feel that they could afford better animals even if they were able to weed out the unprofitable cows.

These are the two problems which puzzled the small farmers of Denmark a quarter of a century ago. They went to work at them and solved them both successfully.

In 1882 the first co-operative creamery was established in Denmark, and immediately the need for a better type of dairy cow was felt. The early attempts at improvement led to the establishment of Cattle Breeding Societies, the first of which were formed in 1885. In these associations the small farmers united for the purchase of pure-bred sires. It gradually dawned upon the Danish dairymen, however, that paper pedigrees do not make milkers. The result was an attempt to get at milk and butter records, which began systematically in 1892. But not until 1895, was the first modern cow-testing association formed.

In 1909 there were 519 of these societies in Denmark, having a total of 12,000 dairymen. The records of the cow-testing associations have revolutionized the aim of the Cattle Breeding Societies. Sires are now chosen, not on the length of their pedigree, but on the strength of the milking strain in their ancestry. The new point of view is adding tremendously to the efficiency as well as the popularity of the Cattle Breeders' Associations. In 1909 there were 1,260 of these organizations, with 31,300 members, owning 1,464 selected bulls.

The cow-testing and breeders' associations have been largely responsible for the increase in Danish butter production, from an average of 112 pounds per cow in 1884, to 224 pounds per cow in 1908. That is, the average product per cow has been exactly doubled in 24 years.

The cow-testing association idea was first introduced into the United States September 26, 1905; when the Newaygo County Dairy Testing Association was formed at Fremont, Michigan. There are now some ninety odd associations in

operation in different parts of the country. Many of them have failed on account of inefficient management. Nevertheless, there have been plenty of successful societies to show conclusively what might be accomplished among American dairymen by a thorough-going system of cow-testing.

There have been two attempts at the establishment of cow-testing associations in our own state. The Washington County Cow-Testing Association was formed in 1911, and lasted but one season. One formed at Tillamook in 1912 is the only such society at present existing in the state. It seems to be better managed, and is likely to prove a success; but as yet it is too young to furnish data on which to draw conclusions.

About the best illustration of a successful cow-testing association on the Pacific Coast is that of the Ferndale Society in Humboldt County, California. It has now been under efficient management for the past four years; and during that time, the herds have shown consistent improvement. The results of three years' work are summarized in the following table, taken from Bulletin 233 of the California Agricultural Experiment Station:

Year.	No. of cows.	Av. lbs. milk.	Av. lbs. fat.	Gain lbs. fat.
1909	581	5,900	251.0	
1910	601	6,483	277.0	26.0
1911	609	6,890	291.5	14.5

Other examples might be cited of American cow-testing associations which have been equally productive of results. But without further illustration, let us ask what an equal annual increase per cow would mean for the dairy industry of the United States. Here we have an average of 40 pounds of butter fat per cow more a year as a result of three years' selection.

Now, we had on January 1, 1910, 21,801,000 milch cows in the United States. Our annual production of butter fat probably averages about 140 pounds per cow. The federal census places it somewhat higher, but we take this figure, which has been the estimated average for the State of Iowa for

a number of years, as a conservative estimate for the whole country. If this average annual production could be raised by 40 pounds per cow, it would mean an annual increase of 872,040,000 pounds of butter fat over and above what we are now making. At the low price of only 25 cents a pound for butter fat, this would be worth \$218,010,000. Of course, we would have to make allowance for the greater cost of feeding a good cow than a poor one; but still it looks as if it ought to be a national venture worth trying out. Does it not?

The plan of organizing cow-testing associations is simple enough. There should be 26 members, located near enough together to enable the tester to get from one herd to another each day of the twenty-six working days of the month. There should be not less than 400 cows in all; and the farmer pays one dollar a year for each cow tested. Such an arrangement enables the tester to spend one day a month with each member. He weighs and tests the milk of each cow night and morning, and on this basis, computes her record for the month. He also weighs the amount of feed consumed by each cow, and on this basis, estimates the cost at which she produces butter fat. The records are copied in permanent form; and at the end of the year, the dairyman should have a fairly accurate record of the product and net profit from every cow on the place. The Dairy Division of the United States Department of Agriculture is ready at all times to assist in the organization of cow-testing associations. Types of Contract, Constitution and By-Laws may be had upon application. It also furnishes blanks and record books; and in many states, where no funds are available for the purpose, it has sent organizers to get the work started, in the hope that the states may see the value of the work and carry it on.

Denmark has now taken another step in advance of the old form of cow-testing association. The new departure has grown out of the increasing complexity of farm business in that country. Dairymen have long felt the need of a more adequate system of farm records than those kept by the cow-tester, and have not personally been able to give the matter the necessary time. The result has been the organization of an association with a smaller number of members than the

regular form of cow-testing society. A cow-tester is hired who is also an efficient double-entry bookkeeper. He keeps a complete set of books for each of the eight or ten members of the association; and at the end of the year, the farmer has a record of his year's business which would do credit to a merchant or a banker. This is a venture which should merit the careful consideration of the progressive small farmer in this country.

BULL-OWNING ASSOCIATIONS: Another crying need of the United States is for a better grade of sires to head both our dairy and beef producing herds. There is probably no more wasteful type of economy in the wide world than the raising of any kind of livestock from scrub sires. The Danes, as we have seen, found this out a quarter of a century ago; and sought a remedy in their co-operative breeders' associations. These organizations are subsidized by the government, and reach every branch of the Danish livestock industry. Besides the Cattle Breeding societies, mentioned above, that country reported in 1909, 270 Horse Breeding societies, with 21,500 members, owning 312 pure-bred sires; 253 Pig Breeding associations with 6,430 members, and 328 sires; and 102 Sheep Breeding organizations, with a membership of 850, owning 107 pure-bred males.

Within the past year or two, the Dairy Division, Bureau of Animal Industry, of our United States Department of Agriculture, has been making an effort toward the establishment of similar organizations among the dairymen of this country. The work is still in its infancy; but anyone interested may receive information regarding it, with a copy of sample Constitution and By-Laws by addressing the Dairy Division, Bureau of Animal Industry, Department of Agriculture, Washington, D. C.

In Oregon, we have our own sire problem to solve. Dr. Withycombe, Director of our Experiment Station, estimates that fully seventy-five per cent of our dairy cows, and fifty per cent of our beef-producing herds are still being bred to mongrel bulls. The high percentage of low-grade sires at the head of our dairy herds is partly to be accounted for by the fact that the majority of the calves from our dairy farms are

sold as veal. Even for this purpose, however, the use of low-grade sires is a doubtful economy, especially when grade animals of the Channel Island breeds are used. At any rate, the building up of our herds demands that there should be double the number of pure-bred sires in the state which we have at present; and what is just as important as pedigrees, especially for the dairy farmer, we should make more of an effort to get sires of highly productive ancestry. Let us learn from the Danes in this matter.

THE CO-OPERATIVE CREAMERY AND CHEESE FACTORY: Undoubtedly we would have less difficulty in arousing interest in more productive dairy herds if we had more co-operative production of butter and cheese. Co-operation throws much more business responsibility upon the farmer, thus forcing him to grasp the advantage of greater productivity. This was demonstrated in the case of Denmark, where both cow-testing and dairy cattle breeders' associations grew up naturally after the co-operative creamery had demonstrated the need of better cows.

Here again, the farmer is led to use discrimination. He finds that the most profitable cow in a creamery may not be the best if the farmer is connected with a cheese factory. In the former case, his chief interest centers in the yield of butter fat; while in the latter, he wants a large flow of milk with an abundance of casein, and is less concerned with the butter fat test. These facts are being recognized in the selection of breeds, to some extent, by the butter and cheese producing sections of the United States. These beginnings of intelligent selection will be greatly stimulated by the development of co-operation in the production of butter and cheese.

This has been the case, at least, in Denmark. The first co-operative creamery, established in 1882, was followed, as we have seen, by the first cattle breeders' association in 1885. Both types of organization have developed together, until in 1909, there were 1157 co-operative dairies and 1260 cattle breeding societies.

The factory production of cheese and butter entered all our dairy districts as a result of private enterprise. The new movement was a great boon to both the farmers and the but-

ter-consuming public. It gave, as a rule, better prices for cream than the old home-made butter had brought; and placed a much better product upon the market. But the interest of the factory owners was to make large profits, while the farmer wanted the highest price for cream. The farmer, as usual, was worsted in the struggle. Most of the privately-owned creameries made big profits for their owners. They reduced the price of milk and cream until the farmers began again the making of butter and cheese at home. Finally, they managed to secure unity of action sufficient to organize creamery corporations with farmers as stock owners. This gave better satisfaction for a time; but ultimately led to worse division than ever in the rural community. The stockholders were making big profits at the expense of their non-shareholding neighbors. This led to the failure of the enterprise, or to its reorganization on a basis nearer the co-operative ideal, which in Denmark had been early recognized as essential to success.

According to the records of the Dairy Division of the Bureau of Animal Husbandry, there were in 1911, 2,120 co-operative creameries out of a total of 6,284 for the United States; and 349 co-operative cheese factories out of the 3,846 operating in that year. Practically all the dairying states have a sprinkling of co-operative societies. Minnesota has 608 creameries owned co-operatively out of 838 in the state; and 24 co-operative cheese factories out of 235. Iowa reports 313 co-operative creameries out of 592 and only one co-operative cheese factory out of 24. Wisconsin, the great dairy state of the Union, has 347 creameries and 244 cheese factories co-operatively owned out of totals of 1,000 creameries and 1,784 cheese factories operating within the state. These figures are only approximate, owing to the fact that in most states there is no record which distinguishes co-operatively owned enterprises from ordinary corporations.

TILLAMOOK CO-OPERATIVE CHEESE FACTORIES: For our own state, reliable statistics are not available, except for Tillamook County. Tillamook specializes in cheese; and has 20 co-operatively owned cheese factories. Their method of organizing and operation should be of special interest to every dairyman in Oregon.

When the need of a co-operative factory is felt, meetings are called and interest aroused. Then a thorough canvass of the neighborhood is made with a view to determining how much milk can be reiled on. The canvass indicates how large a factory will be required; and on this basis, they organize a corporation with a capital stock ranging from \$1,500 to \$2,500, with shares varying from \$10 to \$100. The farmers subscribe for the stock. In case enough of the stock is not sold to finance the factory, a loan is secured from the local banks. They usually are able to get what credit they need, Secretary-Salesman Carl Haberlach writes me, at the very reasonable rate of 4 per cent per annum for two years. By the time the loan matures, they have as a rule saved enough to pay all debts.

The common plan of doing business is to set a fixed charge per pound for making and selling the cheese. The aim is to make this high enough to meet all expenses and pay a fair rate of interest as dividends on stock.

The cheese-maker is hired at a salary of from \$1000 to \$1,200 a year. Then, 16 co-operative factories, and three privately-owned concerns have united in hiring a common inspector and in maintaining a central office and sales agent at Tillamook. Every cheese is inspected and unless it comes up to a certain standard it does not receive the brand of the association. Cheese bearing the brand of the association has attained a reputation which makes the work of the selling agency a pleasure. The sales department, in charge of Mr. Haberlach, handled 3,100,000 pounds of cheese during the past year; and received in payment about \$510,000, or an average of about 16½ cents a pound. Both the inspector and the sales agent receive fixed salaries, to which all the associated factories contribute in proportion to their output. Most of the supplies required by the factories belonging to Mr. Haberlach's agency are purchased in wholesale quantities, thus saving about 15 per cent in cost.

Since cheese is made on the basis of a fixed charge per pound, the net profits vary inversely as the expenses of the year. Any extraordinary expense means smaller dividends on stock. Under favorable circumstances, dividends have been

as high as 20 per cent; while again, they have gone almost to nothing.

Each association is under a board of three directors, elected by the shareholders at their annual meeting. The by-laws stipulate that each member shall have but one vote in managing the affairs of the corporation, regardless of the number of shares he holds. Although this provision conflicts with our corporation law, under which the factories are organized, the members abide by the by-laws. The by-laws again conflict with the state law in their provision that no member shall sell his stock without first offering it to the association. These elements of confusion arise because of the fact that we have a co-operative law in this state so idealistic in its provisions as to be practically useless. Hence, co-operative societies are forced to organize under corporate law.

Though this dividend scheme seems to give satisfaction at Tillamook, it is not true co-operation, and is being gradually abandoned in Wisconsin and Iowa. It has been found that high dividends always lead to trouble and division. So they are giving way to a moderate interest on the actual investment, followed by the distribution of the net surplus among the patrons in proportion to the milk or cream supplied the association.

Apart from the method of paying dividends, the Tillamook associations give a fair idea of the organization of creameries and cheese factories throughout the country. Experience has shown that there should be an assurance of at least 400 cows for a creamery, or 200 cows for a cheese factory before an association is started. If these numbers cannot be relied on, the dairymen would probably do better to form a milk-shipping or skimming station to market their product.

Capital is commonly raised on the Tillamook plan, the members taking the stock and paying for it, either in cash or with their negotiable notes. The common European method of borrowing the necessary capital on the joint liability of the members of the association has not found much favor in the United States.

OTHER BRANCHES OF AGRICULTURAL PRODUCTION: In our rather lengthy description of the possibilities of economy in

the dairy industry, we have set forth the underlying principles of success in practically all branches of agriculture. Progress which is deep-rooted and permanent can only be achieved through the unification of rural forces and resources. To right of him and to left of him, the farmer comes face to face with consolidated capital under expert management. Only when reinforced by union with his fellow agriculturists, is he in a position to demand fair treatment. For the achievement of this end, co-operative enterprise has, as we have seen, proved effective in dairy industry. It remains to show briefly what it has accomplished in other kinds of agricultural production. We may take for our purpose, (1) Condenseries and Canneries, (2) Packing Houses, (3) Flour Mills and other co-operative enterprises of the Farmers' Union, (4) Fruit Growers and Market Gardeners' Associations, and (5) Warehouses, Storage Plants and Grain Elevators. This list might be much extended; but it is sufficient for our purpose, which is to illustrate principles and point out advantages.

For all other forms of co-operative association, we may lay down the rule observed by the Tillamook dairymen. Begin the movement with a careful survey of the community. See that there is enough business in sight to support the organization and make it pay. Otherwise, it will simply be money wasted, and will bring the whole co-operative movement into disfavor. For the purpose of passing judgment on the preliminary survey, an expert should be employed. This will mean some expense; but the outlay will be trifling compared with the loss, disappointment and ill-feeling following the failure of an enterprise which should never have been entered upon.

(1) **CONDENSERIES AND CANNERIES:** The plant for the preparation of evaporated and condensed milk properly belongs to the dairy industry alongside of the creamery and cheese factory. On account of the more limited market for the product, however, it is a form of enterprise which should be much more carefully investigated before a co-operative association is formed.

The condensery and the cannery are alike in that both aim to preserve food products in hermetically sealed tin cans.

On account of the greater ease with which its variety of products can be marketed, the latter is much better adapted to co-operation. The great advantage of a cannery in a farming community is that it gets a large percentage of its raw material from products which would otherwise go to waste. This fact is winning for the cannery a place among enterprises carried on by associations of farmers.

Our co-operative cannery here at Corvallis, for example, which ran last summer for its first season, handled almost everything usually put up in cans, from beans to chickens. It stands ready to pay fair prices for the surplus of vegetables and fruits which would ordinarily go to waste. Large quantities of cherries in this neighborhood were cracked by heavy rains last summer. These would have been a total loss had it not been for the cannery. Our Corvallis cannery is operated by the Benton County Growers' Association. Anyone may become a member of this organization by purchasing a share of its capital stock for one dollar. The working capital for the cannery is raised on the notes of the association in denominations of \$10 or multiples thereof, bearing interest at 8 per cent.

During the past season it paid fair prices for materials, much of which would otherwise have gone to waste, and came out with a small cash balance after paying running expenses. Its future seems assured, if the farmers only continue to stand behind it.

Another Oregon cannery at Eugene seems to have become firmly established. In financing it, the farmers subscribed for stock, on which they allow themselves dividends not to exceed 10 per cent. The remainder of the net profits is distributed among the patrons in proportion to the products they have supplied.

(2) **MEAT PACKING HOUSES:** The farmers of America have yet to learn that they cannot afford to continue indefinitely raising hogs and cattle for the purpose of producing fresh crops of wealthy dealers and millionaire packers. There is no reason why the farmers should not own their meat packing houses just as the farmers of Denmark do. One step in the right direction has been taken in our North Central States,

where a number of co-operative livestock shipping associations have been formed.

(3) **FLOUR MILLS AND OTHER PRODUCTIVE ENTERPRISES OF THE FARMERS' UNION:** The report of the National Secretary of the Farmers' Education and Co-Operative Union of America records the existence of three Union flouring mills within the Oregon and Southern Idaho division. It is claimed that they are a success, and are not only paying higher prices for wheat, but are able materially to reduce the cost of flour to the members of the Union. At the present writing, I have been unable to obtain very definite information regarding the Farmers' Union flour mills in Oregon. One of them, at North Powder, is a corporation in which the stockholders are members of the Farmers' Union. It has proved a paying venture for the farmers, notwithstanding the fact that they do business on very favorable terms with all other Farmers' Union local organizations.

Our Corvallis Local, for example, obtained a shipment of flour on which they saved 20 per cent on local prices for flour of the same grade. This is in keeping with the policy of the Union, wherever it has gained a foothold. Flour mills, cotton gins, fertilizer factories and mixers, peanut cleaners, oil mills, electric light plants, warehouses, and banks are among the productive enterprises carried on co-operatively by the farmers of the states where the Union is strong.

(4) **FRUIT GROWERS' AND MARKET GARDENERS' ASSOCIATIONS:** Among our most common forms of co-operative enterprises are the growers' associations for the marketing of fruits and vegetables. Although primarily marketing organizations, these associations make their productive activities the fundamental basis for successful marketing. They work upon the principle that a commodity well prepared for market is half sold. Hence, one of the greatest gains from such organizations consist in the standardization of the product. Everything offered for sale is inspected and sold strictly according to grade. Improved methods of production are stimulated; and a healthy rivalry sets in among growers, which is more effective in getting results than anything ever accomplished during the palmiest days of free competition.

Funds are raised in much the same way as for a creamery or any other co-operative organization requiring expensive equipment; and the amount of the capitalization depends upon the estimated needs of the association. The Hood River association, for example, which has its own warehouses, packing sheds, cold storage plant, and equipment for producing artificial ice, is capitalized at \$25,000.

(5) **WAREHOUSES, STORAGE PLANTS AND GRAIN ELEVATORS:** Seasonal changes have been to a large extent eliminated from the diet of man in modern society. Rapid transportation, with its cold storage equipment, bridges the gap between summer and winter as the seasons creep from zone to zone. But just as important in preserving the uniform variety found upon our tables throughout the year, is the local warehouse and cold storage plant. These, with the grain elevator, are usually looked upon as part of the necessary equipment for marketing, and will come up again for consideration in Chapter III on Co-operative Marketing. It should not be forgotten, however, that they perform a function as truly productive as a cannery or a fruit drier.

CHAPTER II

MARKETING FARM PRODUCTS.

In the last chapter we considered the importance of preparing farm products for market. It is well to reiterate here that no selling scheme can succeed where the farmer from any cause turns out poor commodities. But assuming that the produce is first class and attractively put up, the most serious economic problem which confronts the American people today still remains to be solved,—that is, the marketing of our agricultural products. It affects not only our six million farm homes; but even more vitally, it determines to a large extent the welfare of the working classes of our cities. Much hard study is being devoted to the marketing problem at the present time. It is being attacked from the standpoint of the farm producer, and ever more vigorously, from the angle of the city consumer.

The net result of the agitation seems to be a growing conviction that the chief factor in the high cost of living is the great expense of marketing. There is too long a road, with too many turns, before the food and clothing from the farm reach the homes of the workers in the city. Then, from the side of the farmer, marketing is altogether too costly, not to say wasteful, an operation. The well-known writer and railroad man, B. F. Yoakum, speaking before the Texas Farmers' Congress a year ago, said: "Two billion dollars should be saved to the farmer annually by economical marketing"; and in a more carefully worked out estimate given in an article in "The World's Work," December, 1912, on "The High Cost of Selling," he places the waste in the marketing of food products at "more than a billion and a half dollars." Of course, such a statement at best is nothing more than a very rough estimate; but taking it for what it is worth, the simplest problem in division will indicate how much the average farmer loses a year as a result of poor business methods in marketing. The

question which now confronts us is: what becomes of this enormous waste of wealth?

Attempts at tracing the increments in price at various stages in the progress of commodities from the farm to the table of the consumer have not been very satisfactory. The data gathered has seldom been taken systematically, enough ground has not been covered, and too much stress has been laid on extreme cases. The best available figures are probably those collected by Professor Carver of Harvard, and published in his text-book, "The Principles of Rural Economics." A part of his list is reproduced here through the courtesy of the publishers, Ginn & Company:

APPLES (No. 1 Baldwin)—Produced in Marlboro, Mass.; consumed in Boston; price received by producer, \$2.25 per bbl.; price paid by consumer, \$7.50 bbl.; difference between price received by producer and price paid by consumer, \$5.25; difference distributed as follows: Picking, \$0.25; barrel, \$0.25; freight, \$0.25; commission, \$0.25; sorting, \$0.15; labeling, carting, etc., \$0.10; storage, \$0.50; wholesaler, \$2.00; retailer, \$1.50.

APPLES (extra fancy Jonathan)—Produced in Wenatchee Valley, Wash.; consumed in Chicago; price received by producer, \$1.45 box; price paid by consumer, \$8.00 box; difference, \$6.55; difference distributed as follows: Growers' Association, \$0.10; railroad rate to Chicago, \$0.50; wholesaler, \$2.45; retailer, \$3.50.

APPLES (best No. 1 Baldwins)—Produced in Maine; consumed in Liverpool; price received by producer, \$4.00 bbl.; price paid by consumer, \$6.42 bbl.; difference, \$2.42; distribution of difference: Barrel, \$0.35; freight, commission to exporter, salesman, etc., \$1.00; retailer, \$1.07.

BACON (home cured)—Produced in Western Massachusetts; consumed in Boston; price received by producer, \$0.08 lb.; price paid by consumer, \$0.19½; difference, 11½; distribution of difference: Freight, \$0.002; dressing, \$0.012; packing, \$0.008; shipping, \$0.01; wholesaler, \$0.048; retailer, \$0.03½.

BEEF (per hundredweight of steer)—Produced on Western ranges; consumed in Boston (?); price received by producer, \$4.25 cwt.; price paid by consumer, \$6.475 cwt.;* difference, \$3.79; distribution of difference: Feeder, \$2.25; freight, \$0.50; killing and chilling, \$1.25; packer on meat, \$1.45; wholesaler, \$2.85; retailer, \$0.4885 (all per hundredweight of steer).

BUTTER—Produced at Ashfield, Mass.; consumed in Boston; price received by producer, \$0.25 lb.; price paid by consumer, \$0.36 lb.; difference, \$0.11; distribution of difference: Creamery, \$0.03; expressage, \$0.008; retailer, \$0.072.

EGGS—Produced at Taunton, Mass.; consumed in Boston and vicinity; price received by producer, \$0.18 doz.; price paid by consumer, \$0.25 doz.; difference, \$0.07; distribution of difference: Expressage, \$0.01; commission, \$0.01; breakage, advertising, etc., \$0.03; retailer, \$0.02.

EGGS—Produced in Indiana; consumed in Boston; price received by producer, \$0.12 doz.; price paid by consumer, \$0.25 doz.; difference, \$0.13; distribution of difference: Storekeeper (who assembles),

\$0.02; transportation in Indiana, \$0.01; Indiana commission man, \$0.0017; railroad rate from Indiana, \$0.025; carting, \$0.001; commission man in Boston, \$0.0075; retailer, \$0.0685.

MILK—Produced in Worcester County, Massachusetts; consumed in Boston; price received by producer, \$0.02 $\frac{1}{2}$ qt.; price paid by consumer, \$0.08 qt.; difference, \$0.05 $\frac{1}{4}$; distribution of difference: Transportation, \$0.00 $\frac{1}{2}$; contractor, \$0.02 $\frac{1}{2}$; peddler, \$0.02.

ORANGES (navel)—Produced in California; consumed in New England; price received by producer, \$1.07 box; price paid by consumer, \$3.00; difference, \$1.93; distribution of difference: Packing and selling, \$0.40; freight, \$0.83; half-refrigeration, \$0.10; local dealer, \$0.60.

DRESSED POULTRY (broilers)—Produced in Eastern Massachusetts; consumed in Boston; price received by producer, \$0.33 lb.; price paid by consumer, \$0.55 lb.; difference, \$0.22; distribution of difference: Shipping and selling commission, \$0.05 wholesaler (including cost of dressing, shrinkage, etc.) \$0.07; retailer, \$0.10.

RICE—Produced in Arkansas; consumed in Boston; price received by producer, \$0.40 bu.; price paid by consumer, \$4.16 $\frac{1}{2}$ bu.; difference, \$3.76 $\frac{1}{2}$; distribution of difference: Milling, \$0.23 $\frac{1}{4}$; miller's profit, \$0.21 $\frac{1}{4}$; wholesaler's expenses, \$0.15; his profit, \$1.00; retailer's expenses \$0.16 $\frac{1}{2}$; his profit, \$2.00.

TOMATOES—Produced in Florida; consumed in Boston; price received by producer, \$0.35 crate; price paid by consumer, \$2.10 crate; difference, \$1.75; distribution of difference: Railroad rate, \$0.62; cartage, \$0.03; shipper, \$0.10; commission merchant, \$0.05; packing, boxing, etc., \$0.35; jobber, \$0.15; retailer, \$0.45.

TOMATOES—Produced in Mt. Holly, N. J.; consumed in N. E. section Philadelphia; price received by producer, \$0.3775 basket; price paid by consumer, \$0.80 basket; difference, \$0.4525; distribution of difference: Freight, \$0.05; commission agent, \$0.0225; wholesaler, \$0.15; retailer, \$0.20.

POTATOES—Produced in Massachusetts; consumed in Cambridge; price received by producer, \$0.55 bu.; price paid by consumer, \$0.90 bu.; difference, \$0.35; distribution of difference: Packing, \$0.02; commission, \$0.03; railroad transportation, \$0.05; retailer, \$0.25.

These prices serve to illustrate the great differences which exist in the proportion of the final retail price which goes to the farmer for different commodities. They also show a wide variation for the same commodity when produced in different parts of the country. As Professor Carver points out, these illustrations serve to indicate the difficulty of estimating what proportion of the price paid by the consumer reaches the producer; and also how hard it is to find out what becomes of the difference. In order to arrive at any general conclusion, each commodity would have to be traced for every single locality in the country where it is produced.

The illustrations further serve to demonstrate what a costly process our system of marketing farm products is under present conditions. Further proof of this wastefulness

will appear when we come to investigate the savings which have been made possible through the establishment of public markets, and the organization of co-operative marketing associations.

For convenience we may treat the subject matter of marketing according to the following scheme, leaving the subject of co-operative associations for the next chapter:

1. Marketing for Local Consumption through Local Dealers.

2. Marketing through Commission Men.

3. Marketing with the consumer Direct.

- (a) The Delivery Wagon.

- (b) Public Market.

- (c) Direct Shipment by Parcels Post and Hamper Basket.

1. **THE LOCAL DEALER:** The simplest type of middleman's service is that performed by the local dealer. This local dealer may be nothing more pretentious than the huxter, who, with his single horse and wagon, gathers a stock of farm products and peddles them from house to house in the city. Such middlemen do not figure largely enough in the marketing of farm products to deserve more than passing mention. What we are here concerned with is the local grocer, butcher, flour and feed man, etc.,—the man who buys farm products directly and retails them to his city patrons.

Both under present conditions and historically, this class of middlemen has performed a great and necessary service for the farmer. We may travel from northern Alberta to Florida, and in every rural town or village, we shall find the general store or the corner grocery handling the surplus of butter, eggs, etc.; and acting as a storehouse from which the rural community draws those household supplies which the farm cannot produce.

Even more important has been the role of the local dealer in our national development. As the frontier planted settlement after settlement in its westward advance, the country store became everywhere the first nucleus of social and economic progress. It served as the clearing-house of ideas. It was the medium through which news from the world outside

the new settlement reached the inhabitants. It became their first postoffice, and it was to a large extent the forum from which public opinion and neighborhood policy were crystalized. It bridged the gap between the pioneer community and the world of necessities and of conveniences left behind. The storekeeper brought in from the outside world whatever the neighborhood required; and was ever on the alert for markets which would take any commodity which the settlement could produce, thus performing a service absolutely essential to progress. As growing population led to specialization and division of labor, the store was the medium through which the surplus products were exchanged. Families having more potatoes, butter, eggs etc. than they could use traded out their surplus with the grocer who resold them to families producing none for themselves.

Under such circumstances the keeper of the country store occupied a position of prominence and great influence. Lincoln was probably only one among hundreds who sharpened their wits and won their spurs over the counter of a country store. Such an opportunity for influence and popularity as the country store afforded, resulted in the doing to death of a good thing. Too many people wanted to be storekeepers; and hence too large a proportion of our population has been shifted from the work of making goods to the task of keeping them after they have been made where people can get at them three hundred and sixty-five days in the year. This keeping of goods "on tap," so to speak, is a very necessary function; but the more economically it is accomplished, and the fewer people engaged in it consistent with efficiency, the better for society as a whole.

This will be clearer by a glance at the three fundamental operations in supplying our material wants. These are:

1. Changing the Form of Things.
2. Changing the Place of Things.
3. Keeping Things Stored Ready for Use.

Those engaged in the first and second classes of operations are farmers, lumbermen, miners, fishers, manufacturers and the transporters of goods. In the third class are all sorts of wholesalers and retailers with their warehouses, elevators, cold-storage plants and places of business. The former changes

nature's elements into vegetables, fruits, grains, butter, eggs and meats. In the same class are lumbermen, miners and fishermen, who go direct to nature's bounty for supplies of useful commodities. The manufacturer takes the products of these so-called extractive industries, and shapes them into such forms as are demanded by the varied wants and caprices of man. The transporter of goods carries them here and there, making them available where they are most needed. The third, or mercantile class, are the Josephs of modern society. They store up goods during fat years and bountiful seasons to feed and clothe mankind during lean years, and unproductive seasons.

But the point I wish to emphasize here is this: The welfare of modern society is just as completely under the control of its Josephs as were Egypt and Joseph's brethren of old. Another point following from our illustration is that one Joseph can collect and store the product of a great many producers. If Egypt had had as large a proportion of Josephs as America has of middlemen, there would have been high cost of living in Egypt during the seven lean years. The results of the over-crowding of the Joseph class are exemplified in the illustrations quoted above from Professor Carver.

But we all know that these figures are not typical of the gains of the small middleman with whom we are here concerned, who buys direct from the farmer and sells directly to the consumer. I take a list of farm products as they are bought and sold here in Corvallis, which illustrate the subject of this section:

PRICES IN CORVALLIS, OREGON, OCT. 7, 1912.

	Price paid the farmer.	Price paid by consumer.
Butter	25@30c lb.	30@35c lb.
Eggs	33c doz.	35c doz.
Potatoes ...	75c@\$1 per 100 lb. sack	11½c lb., \$1 per cwt.
Onions	\$1@1.50 per 100 lbs.	21½c lb.
Cabbage	1@1½c lb.	2c lb.
Parsnips	1½c lb.	1½@2c lb.
Apples	75c@\$1.50 box	75c@\$2 per box

Chickens	11½ @ 12½c lb.	14 @ 18c lb.
Ducks	12 @ 12½c lb.	13 @ 15c lb.
Turkeys—Live	18 @ 22c lb.	same price
Turkeys—Dressed	25c lb.	same price
Wheat	75 @ 80c per bu.	2c lb., \$1.75 cwt.

2. **MARKETING THROUGH COMMISSION MEN:** But a comparatively small proportion of the farm products of America finds its way to the consumer through the local dealer. In most cases, the local men know little more about the process through which the products from the farm reach the table of the city consumer than the farmers do. They only know that those products which they have not been able to resell locally are usually sent to a commission merchant in the nearest large city. Many farmers also ship directly to the commission men instead of selling to local dealers.

The function of the commission merchant has grown up naturally. He is the assembler of the great variety of commodities made necessary by the complexity of modern life. As industry becomes diversified, and different regions specialize in making or growing certain kinds of goods, the problems of marketing become harder to handle; hence, the task of the commission man has grown increasingly complex. His function is that of an agent who charges a percentage on all that he can sell. His annual income depends on the amount of goods he can handle in the course of the year. But the commission business, like that of the retailer, has become more and more over-crowded. In every large city an army of such competing middlemen are competing more or less blindly for trade. The results are not hard to forecast. In plentiful seasons, gluts of the principal markets are of frequent occurrence. The commission men have attracted more products than consumers can purchase at prevailing prices. The shipper bears the loss, and it not infrequently happens that instead of a check, he receives a bill for freight and storage charges. These so-called gluts could generally be avoided by an organized system of intelligence, reaching both the producing and marketing ends of the system; but where both shippers and commission men are working so largely in the dark as under present American conditions, such losses are occasionally unavoidable.

The position of the commission man is often far from enviable. He must usually accept such goods as are sent him—good, bad and indifferent—and do the best he can with them. His difficulties are especially great where he has a large patronage of individual shippers sending products directly from the farm. Patrons heap upon him all the blame which they should often charge to their own carelessness in sending inferior, poorly graded, badly put up products to market.

But the storm of abuse which has recently been hurled against the commission man has not been entirely unmerited. There are few lines of business in which it is harder to detect dishonesty. When the farmer sees his shipment to the railway station he loses track of it, and has only the haziest sort of idea of its subsequent history. The possibilities of damage and the vicissitudes of the market are actual factors in determining his returns. These elements of uncertainty have doubtless been used by unscrupulous commission men as a cloak for dishonesty. Enough cases of fraud have been actually traced to place the whole commission fraternity under a cloud of suspicion. Dissatisfaction due to the inefficiency of the system finds expression in charges of dishonesty. Dishonesty there doubtless is and has been, but to condemn all commission men, or even a very considerable part of them, is entirely unjust.

As a matter of fact, this class of middlemen is as much a victim of circumstances as the farmer himself. It is again a case of too many Josepps and a confused, haphazard method of gathering in and redistributing the corn.

3. MARKETING WITH THE CONSUMER DIRECT: Revolt against the local dealer and the commission man has taken the form of various schemes for getting into more direct relations with the city consumer. We may notice briefly the delivery wagon and public market as methods open to those living within driving distance of the city consumer; and direct shipment to city patrons from those farther away.

Some desirable results follow all of these ventures. The farmer gets more for his products and the city man gets more for his dollar. To the extent that this is true, we have a solution for, both the low prices of farm products and the high

cost of living. But from the farmer's point of view we believe the advantage is usually secured at too great a cost.

(a) DELIVERY WAGON: To take a local illustration: It is estimated that there are about one hundred farmers living in the neighborhood of Portland who run their own delivery wagons for the sale of milk. It occasionally happens that from fifteen to twenty different farmers have customers in a single block. Think of that! Twenty different farmers, representing twenty men and twenty teams, or single horse outfits, drive round a single city block three hundred and sixty-five days in the year for the purpose of delivering two or three quarts of milk each! Wouldn't that make a tid-bit for the soap-box socialist orator? What a shameful competitive waste! The dairy farmers around Portland could unite in a co-operative milk selling association, and save the time and labor of nine men and teams out of every ten now in the field.

The enormous waste in milk distribution is splendidly illustrated by an article in the February, 1913, issue of the "World's Work," which has just come to hand, in which the writer, Dr. John R. Williams, shows up the conditions of the milk supply of Rochester, N. Y. He says: "For example, I have found that, in a section in which most of the inhabitants were negroes, 23 distributors were traveling 20 miles daily to supply 165 homes which could be supplied by one distributor traveling only two miles. On an average, in each of four sections of American workingmen, 47 distributors were traveling 38 miles to 431 homes, in every case a waste of more than 40 men's work and of 25 miles of travel." This is typical of the inefficiency disclosed throughout the article.

A careful investigation would probably show similar waste in other branches of delivery wagon trade, such as garden truck, fruits and poultry products. The astonishing fact is that farmers can afford to run their own wagons under such wasteful competition, rather than take the prices offered by the retail middlemen. Yet the fact remains that many prosperous farmers attribute their success to their delivery wagon and direct dealing with the consumer.

(b) THE PUBLIC MARKET: Then we have the public market as a means of dealing directly with the consumer. This is

a system of marketing farm products which has had a long and honorable career. It would seem to be as old as city life itself; and through long ages, was almost the sole medium through which towns drew their supplies from the surrounding country. Even today, practically every European town has its public market. Town and country meet in the market square, where the city dweller deals directly with the grower of his meats, fruits and vegetables. The market habit is born and bred in every inhabitant of both town and country. It is a habit with the force of generations behind it.

But it is a habit which has never been widely acquired in America. Our rapid development, the early rise of commercial agriculture, the marvelously rapid growth of our cities, and the demand of our city populations for a much greater variety of products than the surrounding country could produce, have all conspired to make the building up of a public market difficult, if not impossible. Our housewives, even in country towns, practically draw upon the whole world for their food supply. This gives the retail dealer his foothold. The telephone system and the delivery wagon, wasteful as they are, entrench him in his position.

Hence it is, that it has been almost impossible to maintain a public market except in such of the older American cities as early adopted the European institution. Many of these older cities have the marketing habit as firmly entrenched as the cities of the Old World.

That there are certain advantages in the public market no one would deny. It gives the individual farmer every opportunity to build up a reputation. In such markets as those of Baltimore, Md., Boston, New Orleans, etc., are stands which have been occupied by the same families for two generations. They have their specialties, and have built up reputations which are assets, just as is the good-will of an old established business. Thus, a premium is placed upon excellence, energy and enterprise, which is much to be desired. Moreover, investigations of many of these old public markets have shown that, even allowing for their time, many of the stallholders are doing much better than they could by selling their products to the local retailers.

Not only does the farmer get better prices for his products, but the city consumer gets them fresh from the farm; and at much more reasonable prices than he could buy them from the retailer, in the absence of a local market.

The difference in price to the consumer is best illustrated by the results attained through the establishment of markets as a result of the recent advance in the cost of living. Many cities have attempted to relieve the situation by the establishment of public markets on conditions especially attractive to the farmer; and, under the pressure of high prices, are trying to cultivate a marketing habit among their citizens. As one of the best illustrations of the recent movement to establish public markets, we may take the city of Des Moines, Iowa.

A few years ago, Des Moines was a straggling country town which drew all its supplies from the surrounding country; and at prices even more reasonable than those indicated in our table on Corvallis, Oregon.

But a rapid growth of population, like that which has taken place in hundreds of other American cities, soon overtaxed the productive capacity of the immediate vicinity. This threw the food supply into the control of the self-appointed army of custodians which so assiduously guards every step of its progress from the farm to the table. This army grew apace in Des Moines. With a population of less than 100,000, there are between six and seven hundred establishments dealing out the food supply, each trying to pay rents, clerk hire, delivery charges, fuel and lighting expenses, and save a little profit besides. The little city has a retinue of butlers for its larder which would turn a concourse of feudal barons in the days of William the Conqueror green with envy. But such pageants are even more costly in democratic America than they were in feudal England.

The common people of Des Moines began to groan under the burden, which became intolerable under the general advance in the cost of living which has marked the past few years. An investigation of prices showed that certain staples were costing the consumer in Des Moines two or three times as much as the farmers were getting for those products in the country round about.

Manufacturers, and other business interests employing labor, began a campaign for cheaper food. The press was enlisted in a crusade for the establishment of a public market. The whole community, with the surrounding country, was aroused. A day was set for a beginning. Twenty-four farmers' wagons backed up to the curb, and were thronged by citizens eager to buy. The news spread through the country, and more than seventy wagons were in line on the next market day. Since then, Mayor James R. Hanna reports that there has been a daily attendance of from 140 to 475 vehicles, ranging from the low donkey cart to the costly touring car. The city is taking every precaution to make it a producers' market; and rigidly guards against the possibility of its falling into the hands of middlemen. It is the place where the farmers and gardeners meet face to face the housekeepers of the city. Besides the open curb market, comfortable quarters for indoor stalls are provided by the city on terms which make the market attractive to the farmer.

The effect upon prices is best told in a paragraph from a letter by Mayor Hanna himself. He says:

"The market place in Des Moines has lowered prices from the start. Grocers have been forced to lower their prices accordingly in order to be able to compete. New potatoes sold in the stores at 60 and 65 cents a peck the day before the market opened, but the price promptly dropped to 40 and 50 cents on the opening day. There were large supplies of cooking apples to be had at from 15 to 25 cents per half bushel, while the stores had been receiving for these same kind of apples from 40 to 50 cents. The price of cabbage in the stores had been three pounds for 25 cents, but the market quickly reduced this to 5 cents for heads weighing more than a pound. When the grocer quoted new onions at three bunches for 10 cents, large quantities were to be found on the market at from two to four bunches for 5 cents. Strictly fresh eggs were offered at the market for 16 cents a dozen. At the stores 20 cents was asked for eggs of doubtful age. Prices on other vegetables and produce showed the same marked difference."

But a study of the whole subject of the public market leads to the conclusion that it is much more advantageous to

the city consumer than from the standpoint of the progressive farmer. It comes down from the time when farms were largely self-sufficing. The farmer had little incentive to produce more than was sufficient for home use. His time was not very valuable, and he found himself with a great deal of leisure in the course of the year. The public market of the nearest town was a good place to loaf and gossip, and was looked upon as a sort of recreation, especially by the farm women. Incidentally, it offered an opportunity for the disposal of any surplus produce on the farms.

But in most sections of the United States, with our busy, complex, commercial agriculture, we cannot afford to have a large percentage of our men and teams lounging in the city two or three days a week. It is a tremendous waste of time and energy, and a direct handicap to progress. Through an article by Norval D. Kemp in the "World's Work," Vol. 22, p. 14479, Montgomery County, Ohio, has become the classic example of inefficiency associated with the public marketing habit. The county seat is Dayton, whose population has grown in thirty years from 35,000 to 140,000. During all that time the rural population has remained practically stationary, at about 30,000. But with four times as many city mouths to feed, Montgomery County farmers produced less in 1909 than they did thirty years earlier. In 1879, with pork at eight and nine cents a pound, there were 33,000 hogs in the county. In 1908, there were but 20,000 hogs in the county with pork selling at 22 and 30 cents a pound. During the same period, the number of cattle in the county declined from 20,315 to 15,288; and the area under cultivation from 159,214 acres to 154,124 acres.

The farmers attribute much of the decline to the difficulty in obtaining farm help. Still an average of 400 or more farmers with teams or single wagons find time to attend the public market in Dayton three days a week the year round. Mr. Kemp estimates that fifty competent clerks would do all the work and business accomplished by the entire public market force of Montgomery County and do it better. We are inclined to believe that even a greater economy would be possible. Such a system may do for farm neighborhoods which are sliding down

the easy grade to a shiftless, unambitious American peasantry; but will find small favor in well-organized, progressive rural communities.

The old-time public market is a product of individualism. But independence and individualism have long since ceased to dominate every industry except farming. The road to progress lies through union, association and co-operation. Only by falling into line with other industries in combining their forces can the farmers hope to secure fair play. We are confident that when farmers have once become efficiently organized, they will have little time or inclination to loaf about a public square in order to sell a few pounds of meat and a peck or two of vegetables.

(c) DIRECT SHIPMENT FROM THE FARM TO THE CONSUMER: Another way of escape from the waste of the middleman which has met with some success is the direct shipment of goods from the farm to the city consumer. The method of shipment most in use thus far has been by express. It is a plan which has long been in use, but has only in recent years been systematically developed. Enterprising city housewives have long been accustomed to send for supplies to friends in the country, thus getting their butter, eggs, fruits and vegetables fresh, and dividing the middleman's profit with the country producer.

Many families regularly send to the country for eggs by the crate, butter by the hundredweight, poultry by the dozen fowl, and bulkier commodities, such as apples and vegetables, by the ton. Cheaper rates are obtained by sending for such commodities in bulk, and there is never any difficulty in disposing of the surplus among city friends and neighbors. Such trade illustrates the principles which we believe must ultimately solve the marketing problem, as well as the high cost of living in the cities. As applied at present, the principle has little widespread influence because of the lack of organization. We shall have occasion to refer to it again in the next chapter.

Direct shipment was first systematized by H. B. Fullerton, Director of Agricultural Development for the Long Island Railroad Company, in marketing the products of the company's two experimental farms. He adopted the plan of shipping in

hampers of uniform size, twenty-four inches long, fourteen inches wide and ten inches deep. The hamper is lined with green waxed paper, and contains six baskets, holding about half a peck each. The shipping weight of the hamper when filled is about thirty-five pounds. An assortment of from seven to twelve varieties of carefully selected fruits and vegetables is placed in each; and the whole sent by express prepaid, at the uniform price of \$1.50 a hamper, netting about \$1.05 after deducting expressage and the cost of packing. Others have since taken up Mr. Fullerton's idea and are making a success of it.

PARCELS POST: Those interested in better economic conditions for farmers have long hoped for great things from the establishment of a Parcel Post as a means of bringing the farm into more direct relations with the city consumer. Let us examine briefly the Parcel Post Act which has just gone into effect. The following summary of the law was prepared for publication by Senator Jonathan Bourne, Jr., the author of the bill:

"Any article is mailable if not over 11 pounds in weight nor more than 72 inches in length and girth combined, nor likely to injure the mails or postal equipment or employees.

"Flat rate of 1 cent per ounce up to 4 ounces, regardless of distance.

"Above 4 ounces rates are by the pound or fraction thereof, and varying with distance as follows:

	First lb.	Each additional lb.	11 lbs.
Rural route and city delivery.....	\$0.05	\$0.01	\$0.15
50-mile zone	.05	.03	.35
150-mile zone	.06	.04	.46
300-mile zone	.07	.05	.57
600-mile zone	.08	.06	.68
1000-mile zone	.09	.07	.79
1400-mile zone	.10	.09	1.00
1800-mile zone	.11	.10	1.11
Over 1800 miles	.12	.12	1.32

"The postmaster general may make provision for indemnity, insurance and collection on delivery, with additional

charges for such service, and may, with the consent of the Interstate Commerce Commission, after investigation, modify rates, weights and zone distances, when experience has demonstrated the need therefor."

From the standpoint of a market for farm products, we are not much concerned with the law beyond the rate for the 150-mile zone. In general, we may say that as the law now stands, the weight of package allowed is too small, and the rate per pound too high to make the act of much service in the marketing of farm products. True, the act provides for its own revision; but that revision will depend on whether the majority of the American people, or the well-organized minority which controls the special interests, shall have the greater influence in determining changes. Judging by the history of railway rate regulation in this country, the outlook for the farmer under the new parcel post is not particularly rosy. As it stands at present, the act is of little value except in carrying high-priced butter and eggs and the more expensive small fruits, if these commodities are not debarred as likely to "injure the mail or postal equipment." The supreme importance of the law lies in the fact that it marks the entering of the thin edge of a wedge which must ultimately mean victory for those who have so long struggled to make our postal system of greater service in promoting public welfare.

The rural route and city delivery provision of the act ought to be of considerable service in marketing. But here again, the limit of eleven pounds will act as a barrier to very extended usefulness. A fair sized fowl would have to be cut and put up into two packages to come under the act. Moreover, for the larger fruits and vegetables, the rate of 15 cents for each eleven pounds is too high. The express company ships Mr. Fullerton's hamper baskets from the north shore and central part of Long Island, a distance of 70 miles or more, and delivers them throughout New York City at the rate of 25 cents for 35 pounds. Truly, the mills of federal justice grind slowly!

Personally, I do not think that either the Parcel Post or the Home Hamper can ever enter very largely into the solution of our marketing problems. To be sure, their usefulness

might be very much extended through organization. If the farmers were organized in such a way as to maintain producers' publicity departments in the chief centers of consumption, so that lists of farmers ready to ship home hampers could be distributed and kept on file, direct shipment might thereby be greatly stimulated.

But the problem of marketing grows yearly more complex. City populations are growing by leaps and bounds; and at the same time, rural districts show a tendency to specialize problem of getting the farm products to the consumer increasingly difficult. The situation calls for organization among the two classes most concerned—the producers and consumers. When effective organization shall have been accomplished, I believe that a more economical method of distribution than that of direct shipment can readily be found.

CHAPTER III.

AGRICULTURAL CO-OPERATION: THE PROBLEM OF ORGANIZED MARKETING.

CO-OPERATION VERSUS COMPETITION: Farmers first learned the science of successful co-operation in the Old World. I say "science" advisedly; for although co-operation naturally falls within the subject matter of economics, its champions have received but little support from the orthodox exponents of that science. Indeed, the majority of the world's economists are still chasing the old will-o'-the-wisp, free competition. Hence, those for whom competition brought only misery and want, could find little guidance from the economist. They had to grope blindly forward until they hit upon principles and plans which would stand the test of practice. The first step American farmers must take in the march of progress, is to unlearn the economic superstition regarding the all-sufficiency of competition, which has haunted our minds since before the adoption of the Constitution. Competition has its place; but it must be made the servant of association and co-operation.

"Farmers unite!" should be our slogan. The platform upon which we must unite needs but two planks. They are very simple, yet strong enough and broad enough to support a rural civilization the like of which the world has never before known. Briefly, they are these: **BETTER EDUCATION, AND BETTER BUSINESS.**

Upon these two planks, little, poor-soiled, storm-swept Denmark has raised herself from the verge of national bankruptcy to the front rank of prosperity among European nations. The most progressive of the other European nations have fallen into line, and are trying to adapt the two planks of the Danish platform to their peculiar conditions.

Both planks are essential. Education broadens us, takes us out of ourselves, makes us better mixers by ridding us of suspicion, selfishness, and conceit. When we have learned

to see ourselves as part of a whole which must advance together, or drop into a condition of servitude to the classes already organized,—then, we farmers are ready for better business. Better business means organized business, large-scale business, economically conducted business.

THE FARMER'S INDEPENDENCE: Practically the only way in which farmers can achieve these conditions is through co-operation. If they work together no power on earth can excel them in strength. Pulling each for himself, as farmers do today, they are the tools of every other interest. Retail merchants stand together, commission men are associated, railroads are merged, the money power is in the hands of a small group of financiers with a mutual understanding, all of these classes are dependent upon the farmer; and yet they are absolute masters of the whole disorganized mob of farm producers which feeds them. When the farmer wants to sell, they say: "We'll give you so much, you may take it or leave it, suit yourself." The farmer wants a binder, he finds that the trust controls the output of binders, and he must pay their price.

Little wonder that all the other interests laud the independence of the farmer! What would they do if the farmers were to follow their example and substitute co-operation for such antiquated independence? Farmers have occasionally been known to do that very thing, even in America. Let us take a few illustrations.

CO-OPERATION AMONG GRAIN GROWERS: In order to see the struggle of the grain growers of the Middle West in its true setting, it will be necessary to take a brief survey of the outstanding features of American economic history since the Panic of 1893. The conditions against which these farmers fought were not peculiar to the grain trade. They were simply one manifestation of the growing pains resulting from a revolution which was nation wide.

THE LESSON OF AMERICAN INDUSTRIAL HISTORY: The decade between 1890 and 1900, saw great changes in the organization of American commerce and industry. Old business standards were shattered; and dogmas sanctified by the reverence of five generations of learned economists were held up to derision. From the time of Adam Smith, the principle of free

competition was looked upon as the panacea for every economic ill. Smith himself, a theologian as well as an economist, believed that men, while seeking their selfish interest, were led by an "invisible hand" to serve the best interests of their fellows as will. His faith spread, and found popular expression in the maxim: "Competition is the life of trade."

Long before 1890, serious doubts had arisen in both Europe and America as to the all-sufficiency of this maxim; but it was left for the period of hard times following the crisis of 1893, to discredit it forever in the American world of industry and commerce. Firms had frequently found it impossible to withstand the tremendous waste of industrial independence and free competition even during good times. Each was bending all its energy toward supplanting and underbidding its competitor. In places where there was no competition, prices soared high enough to compensate for the slaughter rates of competitive centers. But whatever had been the financial distress of competitive waste during good times, it was as nothing compared with the havoc following the panic of 1893. As Professor E. S. Mead, in the introduction to his "Trust Finance," says: "The aggregate liabilities of failures in manufacturing and trading from 1894 to 1898 exceeded \$725,000,000. Many of those who did not fail outright labored under heavy burdens of debt."

With the bountiful wheat crop and better prices of 1897, the country began to recover. But it soon became evident that a new spirit had taken possession of the business world. Consolidation and co-operation had supplanted the warfare of competition. The so-called trust movement had begun in earnest. Quoting Mead again: "In three years, 1898-1900, one hundred and forty-nine large combinations, with a total capitalization of \$3,578,650,000, were formed."

This movement has been growing ever since, and ever since, have leaders among our statesmen, with typical American lack of historical perspective, been trying to shatter the trusts and bring back the palmy days of free competition. Their efforts will pass into history as one section of the chapter of incidents which will chronicle the bungling attempts of young democracy to get its bearings. Industrial and commer-



CO-OPERATIVE MARKETING

cial consolidation has come to stay. The question for the statesman who is intelligently solicitous for the welfare of our democracy is not "Shall large combinations exist?" but rather, "In what form, and under what limitations of power shall they exist?"

The Sherman Anti-Trust Act of 1890 has concerned itself mainly with the former question. For almost a quarter of a century now that act has been on trial. Those best acquainted with its working, maintain that it has only obscured the problem by driving a few combinations under ground. The legal evidence of their existence has been destroyed. They operate now where the law cannot reach them.

The problem for the future is the regulation not the destruction of the trusts. We want to get rid of the evil of the trust, and preserve the economies of consolidation. One way to go about this is for the state, by virtue of its police power, to compel publicity, regulate prices, and control the treatment of workmen. Another method is for the masses to take over the control of industry and commerce, and distribute the profits among the many which have hitherto been appropriated by the few. There are many illustrations of this latter method in European economic history which we must reserve for fuller treatment elsewhere. We have a few American cases which are right to the point; one of the best is that afforded as a result of the struggle of the grain growers of the Middle West with the Elevator Trust.

THE OLD SYSTEM OF GRAIN BUYING: Previous to the crisis of 1893, the buying of the grain throughout the corn and wheat belts was in the hands of local dealers. Amongst these dealers, there undoubtedly was a varying amount of competition; though the extent to which it existed and its salutary effects have been much magnified by those who pine for the good old times which are gone never to return.

The writer was acquainted with the grain business in one small town, where the whole system was extremely wasteful. Three dealers, each with a separate equipment, were supported by a business which one good elevator could easily have handled. It was an open secret among their friends, and was perfectly evident to the farmers themselves, that the three

men worked in harmony, agreeing in advance as to how much business each should have, and also regarding the prices to be paid. Farmers living at a distance, who had a choice of marketing centers, were sometimes given an advantage sufficient to attract their patronage. This and other causes occasionally led to discontent; but the dealers were good fellows, who treated frequently, and on the whole, kept the farmers in good humor. Doubtless the same conditions existed in hundreds of other small marketing towns of the grain belt.

CONSOLIDATION OF GRAIN ELEVATOR COMPANIES: By 1900, this system of marketing through local dealers, more or less independent of each other, had been almost entirely driven out by systems of elevators owned by large corporations. Some of these corporations were small, comprising only ten to fifteen elevators; while others owned and operated large systems. By 1898, for example, the Peavy Company controlled over 800, Armours operated 700, Councilman had 150, and so on.

Each aimed at the control of the grain trade on a certain line of railway. The representative of the large company entered a town and sought to buy out one of the local dealers. If this failed a new elevator was built; and the local buyers were subjected to a competition which usually required but one season to bring them to terms or ruin. The farmers grasped eagerly at the high prices offered by the new elevator. They had lots of time to repent afterward. Once the local men were put out of business, the trust elevator took it all back, with good interest, in the low prices they paid.

ELEVATOR TRUST FINANCE: The methods by which the corporations extended their powers were similar to those of the trust promoters everywhere, during this period. In a report recently prepared by John F. Sinclair for the Wisconsin Department of State the following quotation occurs: "Charles Peavy, for instance, would go into a town and buy out an elevator for \$5,000. This would be put into the Peavy Elevator Company for \$11,000 of its stock. Five thousand dollars of this stock, enough to cover the real cost, would be sold out to outsiders, the six thousand dollars or controlling interest remaining in the hands of the company." Little wonder the movement spread! Still less wonder that the farmers groaned!

Out of them came the money to pay dividends on the \$11,000 stock, \$6,000 of which was pure water.

But consolidation was not to end here. The trust movement was in the air. Every line of enterprise was looked upon as a fair field. The inducement was not merely the saving of competitive wastes, but the gains possible through the control of prices.

The latter was the goal of the grain-buying monopoly. By 1900, the large corporations had united in the Grain Dealers' Associations of Illinois, Iowa, Minnesota, the Dakotas and Nebraska. The system was centralized among the owners and operators of the elevators and warehouses of Chicago. It controlled the grain business through committees which met Saturday evenings at Decatur, Illinois; Des Moines, Iowa; Minneapolis, Minnesota; Omaha, Nebraska; and Kansas City, Kansas. These committees determined the maximum prices which were to be paid for grain during the following week. Cards were printed indicating the track bid on various grains for each of the above named cities; and the dealers understood that the card indicating the track bid at Des Moines, for example, set the maximum prices to be paid throughout Iowa.

A system of pooling business was also enforced. Each dealer was allowed to purchase only so much grain; and in case he ran above that amount, he paid into his association penalties, ranging from one cent a bushel for oats, to ten cents a hundred on timothy seed. The amounts so collected, less a small fee of 75 cents a month, were paid over to dealers getting less than their share of business.

It was strongly suspected that the associated dealers were favored by rebates from the railways. An investigation conducted by the Interstate Commerce Commission in the summer of 1906, under a resolution introduced into the Senate by Senator Lafollette, failed to disclose a system of rebates. It did show, however, that the large corporations were the recipients of costly favors from the railways at terminal points of their lines of elevators. In some instances the railways purchased elevators, kept them in repair, and gave them free of rent and taxes to large shippers.

Such favors, together with the fact that the various com-

mission men were all cowed by the large corporations, made it almost impossible for an independent buyer to exist.

THE FARMERS' ELEVATOR MOVEMENT: Among the farmers, dissatisfaction with the methods of the grain trust was growing rapidly. Their remedy seemed to lie in elevators owned and operated by the farmers. The first successful farmers' elevator in the West was organized at Rockwell, Iowa, in 1889. It immediately felt the full force of competition with the organized dealers. Nevertheless, two other companies were started in 1900; and by 1904, there were thirteen such companies of farmers operating elevators in Iowa.

In almost every case, all sorts of obstacles were thrown in the way of the farmers' elevators. Prices were paid for grain which the farmers' elevators could not meet without losing money on every bushel handled. The railways also made progress difficult for the farmers' companies. Besides the favors shown large terminal buyers, referred to above, they sometimes made it very difficult to obtain suitable sites for farmers' elevators; and were also accused of discrimination in the promptness with which cars were supplied, and shipments carried through to their destination. The commission merchants were all afraid to handle the grain from the farmers' elevators, lest they should be boycotted by the members of the grain dealers associations. Since the farmers' elevators also undertook the purchase of supplies of coal, lumber and other staple commodities for their members, they roused the opposition of the coal and lumber dealers, and retail merchants' associations.

All this opposition was probably the best thing possible for the farmers' elevator movement. It roused the fighting blood of the rural community, and the farmers determined to win out. In most cases they doggedly refused the high prices of the line elevators, and took what their own association was able to pay for grain. In others, they imitated the penalty clause of the associated grain dealers. They permitted their members to sell to the elevator which offered higher prices than the traffic would bear, on condition that they paid the excess into the treasury of their own association. A penalty of one-half to one and one-half cents a bushel, exacted from

members selling to outsiders, has been sufficient to save the co-operative elevator from ruin.

The opposition of the railways and commission men declined in proportion as the farmers' elevators increased in number. There are now over 1,800 of these in the Middle West. Commission men vie with each other for a share of their business, wholesale houses solicit their patronage, and the railways are glad to handle their traffic.

Elevators are organized with a paid up capital varying from \$5,000 to \$20,000. The average farmers' elevator of Iowa, with a capacity of 20,000 to 25,000 bushels, costs from \$4,000 to \$5,000. Over and above the cost of building, from \$2,000 to \$3,000 in cash is required as working capital in the grain business; and much more is needed where a retail department for coal, lumber and other supplies is run in connection.

Most of the farmers' elevators are organized as ordinary corporations with the shares of stock ranging from \$25 to \$100. The only co-operative features consist in the limitation of stock ownership and voting power. In most cases, stock ownership is limited to ten shares per member; and each shareholder has but one vote regardless of his holdings. But grain is bought outright at a fair price from both members and non-members, and the profits distributed among the shareholders. The newer organizations, however, are adopting the true principle of co-operation. They pay a fair rate of interest on the investment in capital stock, and rebate the profits to the farmers in proportion to the amount of grain they have sold through the elevator. This must come to be the rule if the co-operative movement is to be permanently successful.

The business of the elevators of Iowa may be taken as affording a fair indication of their importance to the farmers of the state. In 1911 they bought and shipped nearly 65,000,000 bushels of grain, handled 200,000 tons of coal, and nearly \$750,000 worth of lumber, besides quantities of feed, flour, farm machinery, sugar and other articles of consumption.

A report received just as we go to press, January 1, 1913, informs us that there are 375 of these elevators at present in operation within the State of Iowa. Mr. Curtis G. Messerole

of Gowrie, Iowa, who has borne the brunt of the struggle with the elevator combines from the beginning, writes to the effect that since victory has been assured, there is a tendency on the part of the farmers to lose interest. Let us hope that this may not be the case; for if it should be, the chances are that the rising generation will have the whole expensive battle to fight over again. Live, devoted leadership may keep this generation aroused; and at the same time may provide for the future of the co-operative cause by linking with it the other plank in the rural worker's platform: better education. Thorough, all-round educational privileges for our boys and girls today will make the problem of organization simple for the next generation.

MARKETING WHEAT ON THE PACIFIC COAST: In our Northwestern wheat belt, the Farmers' Educational and Co-operative Union has been the champion of farmers' rights. This organization is of Southern origin. The charter of the first local Union, organized in Raines County, Texas, bears the date of August 28, 1902. It arose as a desperate effort at self-help on the part of cotton planters, who were oppressed by one of the most wasteful systems of marketing, and by the most burdensome rural credit facilities ever known in this country. Retail dealers in fertilizers and other farm supplies, made advances on the crops before they were sown; and as additional security, took a mortgage on the goods and chattels of the borrowing farmer. Outrageous prices for supplies and high rates of interest were sucking the very life blood out of the average farmer.

Out of this desperate condition grew the Farmers' Union. It is primarily a great business organization, devoted to the buying and selling of agricultural products, and the purchase of farm supplies. The center of its economic activity is the farmers' warehouse. To the warehouse, growers bring their products, whatever they may be; and either have them sold directly; or if the products be grain, cotton, or tobacco, and present prices are unsatisfactory, the commodities may be left in storage until such time as the markets are more favorable. On the security of the warehouse receipts, credit may be obtained on more reasonable terms than was possible under the

old system, although there is still vast room for improvement in the facilities for rural credit everywhere in America, and above all, throughout the South. The warehouse is also the center from which farm supplies are distributed co-operately at actual cost; but of this we shall treat more fully in the next chapter.

The new organization brought instant relief from some of the worst evils; and in consequence, grew rapidly in membership and popularity. The Farmers Educational and Co-operative Union is now a national organization of farmers, with twenty different State Unions, and Locals operating in a number of others. It is everywhere securing better prices and cheaper supplies and is pledged to fight for more adequate and cheaper credit facilities for agriculture. Reports indicate that it is a strong factor in promoting greater prosperity among farmers.

The warehouse method of handling grain in sacks, which prevails throughout the wheat belt of the Pacific Coast, offered the Farmers' Union a splendid opportunity to extend its field of operations. The old system of corporation owned warehouses was even more burdensome than the line elevator system described above. The statement was recently made in public by one thoroughly acquainted with the old system, that the buyers exacted a tribute of 10 cents on every bushel of wheat passing through their hands.

The Farmers' Union began organizing warehouses, financed in much the same way as the farmers' elevators of the Middle West. The same forms of opposition developed, with almost identical results. The farmers triumphed; and today, the "Inland Empire" is dotted with farmers' warehouses. There are twenty-nine or thirty such warehouses operating in Oregon alone.

The Local Unions of Oregon, Washington and Idaho maintain their own terminal grain agencies at Seattle and Portland. During the fiscal year ending June 1, 1912, these agencies handled 3,000,000 bushels of wheat. The farmers marketing through the Union agencies made a clear gain of more than four cents a bushel over prices paid where there were no farmers' warehouses, or a total of over \$120,000. But this does

not tell the whole story by any means. Wherever a farmers' warehouse existed, the old dealers were compelled to come to time and pay the same prices as the Union buyer. Hence, this \$120,000 probably represents but a fraction of the money which has found its way into the producers' pockets as a result of the activity of the Farmers' Union.

CO-OPERATIVE MARKETING OF DAIRY PRODUCTS: There is no commodity made in which more depends upon the making than it does in the case of dairy products. In Denmark, the country which has led the world in scientific dairying, greater stress has been laid on quality than on the purely business side of marketing. Since 1900, the use of the Horn Trademark upon all Danish butter marketed has been obligatory. The quality of the butter sold under this trademark is maintained by a federation of 1,300 dairies, whose members guard the reputation of the horn brand as they do the national honor itself. The presumption is that the reputation of the brand is the most fundamental consideration in marketing.

Nevertheless, there were in 1909, six co-operative associations, in which 225 dairies pooled their product for export. These societies perform for their members the function which formerly supported a host of middlemen. They place their product directly upon the British market.

In this country, such marketing organizations have gained but little foothold. In most cases, butter and cheese are consigned to commission men and jobbers, who use their own discretion in making sales. Some beginnings of co-operative marketing there are, to be sure. One of the best illustrations is that of the Tillamook cheese factories, which we had occasion to notice in our chapter on production. Speaking of his work, Secretary-Salesman Haberlach says: "Our method of doing business has proven successful for us over here, largely because the same has been placed on a business footing at the beginning. If each factory were to try to sell its own cheese and do only a local business, we would be cut off from car shipments and would have only a small market. As it is, we can distribute our goods from Bellingham to San Diego, and as far east as Kalispel and Missoula. We sell to wholesalers and jobbers, not to retailers."

It must also be remembered that the Tillamook sales agency enables its members to purchase as well as sell in car lots. The savings on salt, paper, boxes, machinery, etc., go a long way toward meeting the expense of the marketing department.

MARKETING OF EGGS: There are few branches of rural marketing more neglected than that of poultry products. Consequently there is no branch of agriculture in which the waste from inefficient marketing is greater. Dirty and clean eggs, bad, middling and good eggs, stale and fresh eggs, white and brown eggs, are dumped promiscuously into baskets or boxes and jiggled over rough roads to the nearest grocer's. The required will depend on the equipment and the volume and kind farmer gets a price which makes allowance for all contingencies; and the retailer ships the unassorted lot to the nearest commission man. The latter dumps the consignment upon some jobber or wholesaler, who either sorts and grades the eggs, or sells them to a retailer as they come; in which case, the city housewife must be prepared for surprises and varied experience. Where the grocer or wholesale dealer undertakes to spare his patrons by testing the eggs before placing them on the retail market, many a case proves a gloomy illustration of the scriptural allusion to the judgment day in which "many are called but few chosen."

This is a condition which ought not so to be. In Denmark, co-operative egg marketing societies have proven very successful. They collect, candle, grade, pack and export about 27 per cent of the eggs of the country. Every egg must be stamped with the date it was laid and the association number of the member. In case a bad egg is sent in it can be readily traced, and the farmer is fined \$1.25 for each offense. Thus, the reputation of the society is maintained; and Danish eggs command the highest price on the British market.

Co-operative egg marketing has made but little progress in this country. The report by John F. Sinclair, already quoted, gives an account of one such organization in Minnesota, and another in Wisconsin. The Minnesota organization, which began with a membership of 70 farmers, has now been in successful operation for three years; and has 250 members

enrolled. The following quotation from Mr. Sinclair's report summarizes its method of operation: "Each member signed a contract not to bring in eggs over seven days old, to put them in carton boxes, containing one dozen eggs each, stamped with the producers' name and the date. The eggs in each carton are required to be of uniform size and color. The very large and the very small eggs are not marketed. These eggs are then taken to the manager of the association, who disposes of them directly to the retail grocery stores in the Twin Cities. He is paid one cent a dozen for his work. The association guarantees each carton in a printed form on the box as follows: 'Eggs in this package, if they have our trade mark on them, are guaranteed to be strictly fresh, clear and of uniform size; and if found otherwise, we wish you would do us the favor to report it, giving number found on egg or carton, and such eggs will be replaced free of charge.'"

As a result of their organization, the association has been able to obtain an average of five cents a dozen more than was obtained for miscellaneous marketed eggs. This meant a gain of \$3,000 on the 60,000 dozen eggs marketed through the society in 1911.

Quite recently the Poultry Department of the New York State College of Agriculture has taken the lead in organizing a co-operative association for the marketing of poultry products from the farms about Ithica. The success of the experiment remains to be seen.

This is a matter to which Oregon farmers could well afford to give more attention. The poultry products of the state amount to \$7,250,000 annually, a sum half a million dollars greater than the value of our fruit crop. Oregon apples have made the state famous; but who ever heard of the Oregon hen? Perhaps a few know something of the record of Miss Corvallis; but the multitude of faithful, scratching, cackling workers which adds seven and a quarter millions to the wealth of the state, has just reason to feel neglected. The reason lies mainly in the fact that apple growers have for years been organized for purposes of marketing, while chicken raisers have not.

THE CO-OPERATIVE MARKETING OF FRUITS AND VEGETABLES: In the chapter on Production, we had occasion to no-

tice the function of fruit and vegetable growers associations in securing better yields and standard grades of fruits and vegetables. We saw that most of these associations own packing sheds, warehouses or other storage plants. All the operations of growing, picking, grading, packing, pre-cooling, storage and shipping properly belong to production rather than to marketing. But without strict attention to the whole process of production, no marketing scheme can be permanently successful. Indeed, the large measure of success which these associations have had both in this country and in Canada, has been very largely due to the incentive they have given to the application of scientific methods in the growing and preparation of the products they handle.

ADVANTAGES OF CO-OPERATION: Bulletin No. 37 of the University of Missouri Agricultural Experiment Station, entitled "Co-operation Among Fruit Growers," summarizes the advantages of co-operation as follows:

- (1) "Enabling the small grower to ship in car lots.
- (2) "Distributing the crop so as to prevent gluts in the markets.
- (3) "Enabling the growers to establish a brand that will be known and sought in the markets, thus insuring better prices.
- (4) "Making possible better business methods in dealing with the fruit buyers, transportation companies, etc.
- (5) "Enabling a community to make use of varieties of fruit that for any reason might not be desirable except in small quantities.
- (6) "Better equipment for handling the crop for a section.
- (7) "Insuring better care of orchards.
- (8) "Giving greater general business ability."

DIFFICULTIES TO BE OVERCOME: Alongside of this list, we may place that of the "difficulties in the way of co-operation":

- (1) "The fact that independent growers who do not help support the association get many of the benefits received by the members.
- (2) "The difficulty of keeping the quality of the goods handled by the association as high as the quality of goods

that would be handled by the best growers working independently.

(3) "Crop failures that get the association out of working order on off years.

(4) "A spirit of envy and lack of confidence and support of the managers by the members."

Doubtless some of these difficulties will persist so long as human nature remains what it is. But they will grow less and less in proportion as ignorance, the arch-enemy of the human race, is overcome.

THE FINANCING OF ASSOCIATIONS: In order to work efficiently all the growers' associations need capital. The amount of business to be transacted. It takes capital to build and fit up packing houses and storage plants. Working funds are also needed to pay wages and other running expenses; and besides, there should be a cash surplus sufficient to advance part of the value of the products as they are supplied by members.

To obtain the necessary capital, the commonest and most successful method employed in this country is the issue of shares of stock. Methods of stock holding and the voting power of members vary greatly, however. Some associations confine their issue of stock strictly to growers, limit the amount which each member may hold, confine dividends to a reasonable interest on the investment, and permit but one vote per member regardless of the amount of stock owned. Such societies exhibit the form of co-operative organization which seems best adapted to American conditions and ideals. They usually distribute all net profits to patrons in proportion to the amount of products each has sold through the association. In order to offer an incentive for all growers to enter the organization, members receive a higher percentage of profits than is paid non-members.

But this is by no means the only method of financing and operating a growers' association. In fact, all shades of deviation might be pointed out, ranging all the way from pure co-operation to the ordinary corporation. Let us, for example, compare the finance systems of the two growers' associations mentioned in the chapter on production: our local society, the

Benton County Growers' Association and the Eugene Fruit Growers' Association.

In the former the share capital goes but a little way toward supplying funds. Anyone can become a member of the Benton organization by purchasing a share of stock for one dollar. The membership includes bankers, merchants, teachers—in fact, anyone who cares to part with a dollar may be admitted; and no member may hold more than one share of stock, nor have more than one vote. Most of the working capital is raised on the notes of the association, bearing interest at 8 per cent. These notes are held by a constituency even more varied than the membership. The whole plan of finance is a rather mixed up affair; but seems to have been made necessary by the lack of confidence among the growers. The Benton County farmers are abundantly able to finance their own association; and it is to be hoped that they may soon get behind it and make it their own. Only by so doing can it be permanently successful.

All fruit brought to the association is either packed and sold fresh, or canned. A member is advanced a certain percentage of the estimated value of his product soon after it is received. Out of the remainder of the proceeds are paid running expenses, and interest on the notes outstanding. One per cent of net sales is placed in a sinking fund, and the rest is returned pro rata to the farmers who supplied the products. It is expected that the sinking fund will meet the notes of the association as they fall due.

The Eugene association is quite differently organized. It is frankly a corporation capitalized at \$25,000, of which amount \$20,000 of the stock has been sold. The shares sell at their par value of \$10; and the purchase of one share entitles a man to the privileges of membership in the association. The dividends paid on stock are determined each year by the stockholders; but they must not exceed ten per cent in any year. As a matter of fact, only six per cent has thus far been paid.

The association operates three departments. All products delivered are inspected and assigned to one or other of these departments, to be packed and sold fresh, dried, or canned, as the case may be. The grower is given a weight slip showing

the kind of fruit, the number of pounds and the grade. Actual expenses of packing, shipping, etc., in addition to five per cent to meet general running expenses and stock dividends, are deducted from the proceeds of each delivery. The remainder is returned to the grower.

The policy of the Eugene association is determined by the regular corporation plan of stock voting. That is, each share has one vote, and a majority vote of the shares decides all questions brought before the stockholders. An amendment to the by-laws of March 26, 1910, limits the number of shares which one grower may hold or vote to five hundred; and at the same time, another clause was added stating that dividends on stock should not exceed ten per cent.

This is far from true co-operation; and may some time result in the control of the association in the interest of stockholders instead of for the general benefit of the producers. Practically all the stock, it is true, is held by actual growers. But experience does not indicate that the farmer who sees the opportunity of living upon dividends exacted from the products of another's toil, is any more proof against temptation than his brother of the Express monopoly or of the Standard Oil.

So while we frame our Constitutions of pious resolves, let's aid in their fulfilment by incorporating the truly co-operative basis: fair interest on capital invested, and the distribution of net profits among patrons in proportion to business done. Such a safeguard obviates the necessity of much repetition of the prayer: "Lead us not into temptation." Still, a corporation, composed of and supported by growers is more desirable than a co-operative organization in which the farmers have not sufficient interest to shoulder their own financial burden, when they are abundantly able to do so.

SELLING METHODS: The great majority of the growers' marketing associations have improved but little upon the local dealer in selling their products. They have saved the profits which formerly went to a number of local middlemen; and where a monopoly or combination among local dealers made excessive gains, the injustice has been eliminated through co-operation. But like local dealers, the co-operative associations have had to take whatever commission men chose to give them.

They have attempted to select the middlemen to whom they sell more carefully than is possible in the cases of an individual shipper; but on the whole, they have brought but little relief from the evils pointed out in our discussion of commission men in the previous chapter.

CO-OPERATIVE EXCHANGES: The next step in the elimination of competitive waste is taken where co-operative associations co-operate with each other in larger selling organizations. An illustration of this was found on a small scale in the case of the Tillamook cheese selling agency, referred to above. There are several examples of still more effective systems found among growers.

MARKETING CALIFORNIA CITRUS FRUIT: The most highly organized of these associations is that of the citrus fruit growers of California. At present 115 local growers' organizations are affiliated in 17 district exchanges; and these unite to form the California Fruit Growers' Exchange. This big exchange is governed by a board of directors, one of which is elected by each of the district exchanges. It sells 60 per cent of the citrus fruit crop of the state. During the last business year (1911-12) it handled 24,000 cars of fruit or 9,000,000 boxes, valued at \$17,000,000 f. o. b. California, or about \$25,000,000 delivered.

These enormous sales enable the exchange carefully to supervise the distribution of the product. The United States and Canada have been districted, so that a definite territory is placed in charge of a salaried agent of the exchange. About 70 of these agents give their entire time an attention to pushing the sale of citrus fruits. Of these, three are general agents, who round up the district salesmen and see to it that they give efficient service.

By means of its agents and its telegraph and telephone service, the exchange acts as an intelligence bureau, through which every grower may obtain exact daily information regarding market conditions for citrus fruits in all parts of the world.

The exchange spends \$150,000 a year in advertising alone. Such an outlay looks large in the aggregate; but on over seventeen million dollars in sales, it means less than nine-tenths

of one per cent. It is an expenditure which benefits every citrus fruit grower in the state, whether belonging to the exchange or not. It has been made necessary by the rapid increase in production. When the organization movement began in 1885, the citrus fruit output of the state amounted to only 1,000 cars a year. At present the product is over 40,000 cars annually and is constantly increasing. Only the most careful working of the whole field of consumption makes the distribution of this increasing output possible.

The big exchange is purely a selling agency. It has practically no need of capital, as its expenses are met out of sales. Its capital stock is nominal, one share being purchased by each district exchange. Its aim is not to make profits or pay dividends, but simply to sell the fruit of its members to the best advantage. From the proceeds of sales is deducted the exact cost of operation. The rest is returned to the growers.

THE FRUIT GROWERS' SUPPLY COMPANY: Closely associated with the exchange is the Fruit Growers' Supply Company, capitalized at half a million dollars. This is strictly a co-operative enterprise, in which the local associations own stock in proportion to the amount of fruit they handle. The Supply Company purchases box material, nails, wrapping paper, sprays, fertilizers, etc., in enormous quantities. The material required for the 9,000,000 boxes of oranges sold last year, for example, amounted to 1,800 carloads of lumber. The local associations are able to reap the advantage of all the economies of the largest scale business, and thus obtain their supplies at very low cost.

THE CITRUS PROTECTIVE LEAGUE: Independently organized, yet embracing eighty per cent of the citrus fruit industry of the state, is the Citrus Protective League. The league is the watch dog which guards the citrus grower against all that threatens his welfare. It works for a high tariff on foreign citrus fruits, struggles with the railways for lower rates, and promotes legislation for the control of citrus fruit diseases. Its success in all of these fields well exemplifies the truth of the old adage, "In union there is strength."

OTHER PROMINENT MARKETING ORGANIZATIONS: Other examples of marketing organizations, which are working along

similar lines to those of the big California Exchange, are the Florida Citrus Exchange, with headquarters at Tampa, Florida; and the Eastern Shore of Virginia Produce Exchange, with its central office at Onley, Virginia. The former is struggling hard to accomplish for Florida what the California Fruit Growers' Exchange is doing for its members. The latter is the greatest of our American truck marketing organizations.

This exchange was incorporated in 1900, and now has about thirty-five subdivisions, or local exchanges, handling close upon seventy per cent of the products of the two counties forming the peninsula on the Maryland side of the Chesapeake Bay. The output consists mainly of berries and sweet and white potatoes. All products are inspected and carefully graded before shipping; the trade-marked brands of the association have an established reputation which makes sales comparatively easy. The exchange has its own agents at the large marketing centers, such as Chicago, Buffalo, Boston, Cincinnati and Toronto, Canada. It has also a long list of commission houses which have been approved, and appointed agents in New York, Philadelphia and other cities. Through its purchasing department, the members of the exchange obtain barrels, crates, fertilizers, sprays, etc., at wholesale rates.

We might indefinitely add to our list of illustrations of organized marketing of American farm products. Many scattered local Granges are engaged in marketing certain commodities for their members. The American Society of Equity, and the Gleaners are also strong organizations of farmers throughout the North Central States operating systems of warehouses on much the same plan as the Farmers' Union. It would be interesting to examine the work of each of these associations; but the limits imposed on this bulletin forbid further detail.

Besides, we have already covered cases amply sufficient to satisfy even the most sceptical that what European farmers have accomplished, American farmers are also capable of doing. We have also found that organized marketing, when properly managed, is a paying proposition for the farmer.

But even if all American farmers were organized into well managed marketing associations, we doubt whether the

problem of satisfactory prices could be thereby fully solved. The farmer can scarcely be expected to take charge of the process of distributing products within the great centers of consumption. That is and ought to be the city man's affair. But so long as the city man manages his business so extravagantly, it will be impossible to pay the farmer what he ought to receive. The New York State Food Investigating Commission showed that the producer gets only \$40 out of every \$100 which the consumer has to pay for food. Most of the other \$60 is added in the distributing process within the city itself. The consumer is already paying more than he can afford. Hence, it looks as if a general betterment of prices for the farmer must depend upon a curtailment of extravagance within the city.

We believe a satisfactory adjustment of farm prices can only be finally accomplished by an organization of city consumers as thoroughly and carefully managed as the marketing associations of farmers. Then the representatives of the two parties most vitally interested, the producers and the consumers, can meet face to face, and bargain to their mutual advantage. Such a scheme is actually in operation between the organized farmers of Ireland and the associated consumers of the English Rochdale Stores. To outline their plan of co-operation cannot form part of our present treatment of marketing. The essentials of the system, however, will be apparent from the study of supply, as outlined in the following chapter.

CHAPTER IV.

THE PURCHASE OF FARM SUPPLIES.

IMPORTANCE OF ECONOMICAL PURCHASING: There is no better index of the efficiency of a business than the record of its purchasing department. The buyer for a large firm is usually a man of extraordinary ability. His knowledge of human nature, of the fundamental economic forces determining prices, must be so thorough as to constitute his vocation a distinct profession. Upon his judgment may hang the whole question of whether the balance sheet at the end of the year is to indicate a profit or a loss. Hence it is, that a large corporation seldom hesitates over a few thousand dollars more or less when it is a question of obtaining a strong man for the head of its purchasing department. It can well afford a good salary for the right man. A shrewd buyer for one of our Western railroads has been known to save his company over \$25,000 on a single deal.

Now while opportunities for saving on purchases of the average farmer look insignificant beside those of a railway corporation, economy is just as essential in the one case as in the other. Inefficient marketing, as we have seen, on the one hand, and wasteful buying on the other, are the Scylla and Charybdis between which many a farmer's boat founders.

GENERAL CRITICISM: Selling and buying are complementary terms. The seller views this operation from one angle, the buyer from another. Moreover, all men are buyers, and most men are sellers as well, either of goods or services. Some men buy wholesale and sell retail; but someone has pointed out that the farmer is the only man who sells wholesale and buys retail. This is not strictly true, as we shall see later; but it serves to emphasize a fundamental weakness in the business relations of the farming class. It means this: The farmer gets the lowest prices at which his commodities are ever quoted; and he usually pays the highest prices for the things he buys.

Then, too, all that we said in our discussion of marketing, regarding the overcrowding of the middleman's vocation applies with equal force here. The farmer has been fondly imagining that he must have competition in order to get reasonable prices. He forgets that this is a rule which works both ways. It is true that the single hardware store in a town catering to a rural community may charge monopoly prices. But, on the other hand, where there are five or six hardware stores in a neighborhood whose wants could be supplied by one, it means that the farmers must keep up five or six establishments with all their costly advertising, store-rent, clerk hire, etc., where one could supply all their needs. You Mr. Farmer are the one who pays for keeping up all that superfluous equipment. We do not hesitate to affirm that in the average country town the number of implement and machine agents, hardwares, grocers, and other middlemen catering to the farm trade is usually three or four times as great as it should be. The question is what can the farmer do about it?

BUYING ON CREDIT: The costliness of the whole system of purchasing farm supplies is very much increased because of the vast amount of business done on time. Buying on credit is very common among the business men of the mercantile and industrial classes. With them it is much less expensive than for the farmers; and for the very simple reason that reputable merchants can always secure bank credit on easy terms. Hence, as a general rule, it is quite immaterial whether they buy goods on credit or use bank credit to pay cash for supplies. The farmer, on the other hand, must generally choose between the country usurer with his exorbitant rates of interest, and the only reputable source open to him, the merchant who will sell him supplies on time. Thus, the available interest rates determine the advantage to which goods can be purchased on credit. The alternative for the business man is the open account on which he pays four to five per cent on whatever amount he requires for whatever time he needs it. For the farmer, the alternative is a fixed time loan bearing eight to ten, or even as high as fifteen per cent interest in some of the newer sections of our Western states.

As a general rule there is little choice between the usury

of the dealer who sells on time, and that of the money lender. The man who buys implements, machinery or supplies on a credit plan probably pays about the same rates as he who borrows under the imperfect credit facilities now open to the American farmer.

UNFAIRNESS TO THE FARMER: There are, moreover, two elements of unfairness in the present system of purchasing which must be noticed. In the first place the man who pays cash is generally unable to secure any better terms than he who buys on time. In fact, most stores even discriminate in favor of the credit customer, by giving the same prices as to cash patrons and adding some gift each time a payment is made on account. The reason given by merchants for this discrimination is two-fold. They say that credit customers are not only more regular in their patronage, but that they buy much more freely and extravagantly than customers who pay spot cash. However this may be, it is unfair inasmuch as it shoulders upon the cash paying customer not only a share of the cost of the credit extended to his reckless neighbor, but the loss from his numerous bad debts as well.

The other element of unfairness which we have in mind, is one which bears especially upon the farmer who buys his supplies in city or town stores. These stores are forced to charge high prices. The high prices are made necessary, partly because the field is overcrowded with middlemen, as we noticed above, and partly on account of the lack of business sense among city housewives. The habit of ordering by telephone in very small quantities at all hours of the day, keeps thousands of men and teams on the run delivering goods. The trading-stamp fad, bargain counters, bargain days, and expensive advertising add greatly to the cost of doing business. All these things have to be paid for out of the selling price of the goods. Hence it is, as the New York State Food Investigation Commission has shown, that food costing 350 millions a year landed in New York City, costs 500 millions a year when it reaches the consumers' kitchens. Every town in America has a similar element of waste in its distributive process. Now, the farmer gets no benefit from the city delivery system which adds from 5 to 15 per cent to the selling price of goods. He

experiences little of the gambler's passion which thrills the city housewife in her innocent chase after trading stamp and bargain counter adventure. Yet, with every purchase he makes, he pays part of the expense of keeping up this costly and irrational system by which the city food supply is distributed.

WHAT CAN THE FARMER DO ABOUT IT? From the foregoing it appears that the present system of purchasing farm supplies is needlessly wasteful and expensive; and the question naturally arises as to whether a satisfactory remedy for existing conditions can be found. Thousands of farmers throughout the country have already answered in the affirmative; and claim they have found relief in making the bulk of their purchases through mail-order houses.

These large firms are usually models of efficiency condensed into the smallest space possible. They practice all the economies of large scale business; and have a minimum of the waste associated with the average city store. Hence, they are able to sell at rates which represent a saving to their customers even after the payment of heavy freight charges. The operation of even our present moderate parcel post system will add greatly to the trade of the mail order houses. The country merchants foresaw this, and were bitterly opposed to the act.

ATTITUDE OF RETAIL MERCHANTS TO PARCEL POST: A great deal of unadulterated drivel has recently been written condemning the retail merchants for their attitude. They were told for example in the November issue of one of our best known farmers' magazines that, "The new law is decidedly in their favor;" and the writer draws a happy picture of coffee, butter, tobacco, books and stationery, and even nails in five or ten pound lots being loaded upon the rural free delivery and piled at the farmers' gates. I wonder if the writer ever learned the simplest mental arithmetic? Granting that the rural free delivery will carry some merchandise from local stores to farmers, it can never be profitable except in case of emergency; and the extent to which it is used will be a measure of the farmer's business inefficiency. A very little figuring on local prices and postal rates will show that the class of goods above men-

tioned, if sent out by rural free delivery will have from 10% to 100% added to prices already too high.

Then how is the city delivery and rural route feature going to benefit the local dealer? As far as we can see, most of the orders he gets for rural free delivery would have come to him any way. On the other hand, let us ask: what about the efficiency of the zone system in protecting the local dealer against the mail order business? We answer in a word. Our present parcel post act will not affect dealers in the heavier cheaper commodities which make up the bulk of the trade in such lines as the grocery and hardware business. But in most lines of clothing and dry-goods, the local dealer will find himself face to face with a competition which will either compel him to handle goods on a smaller margin of profit or drive him out of business altogether, especially after the rates are reduced, as they undoubtedly will be.

The new bill favors the mail order houses by the difference between the old express charges and the new parcel post rates. In most cases, the express rates are still lower than those of the parcel post; but on light packages of dry goods, the new law offers some advantage. A ten pound suit of clothes from Chicago to Corvallis, would cost by express, \$1.40; while by parcel post, the rate on the same suit would be \$1.01; or, adding the 10 cents insurance charge, \$1.11. The difference would be still greater in the case of lighter packages; but for most of the business which requires rapid transit, the express rates are much lower than those of the parcel post.

Although there is no general reduction in rates, let it not be assumed that the present parcel post is to be condemned as a failure. To be sure, it is not what we hope it may soon be. But, as has been frequently pointed out, it is the best parcel post measure that could have been secured from last Congress. Perhaps, too, it is a safe way to begin. Where such radical changes are involved it is best to make haste slowly. The virtues of the act are two-fold; first, it gives the farmers a system of parcel delivery which the express companies never extended them; and second, it marks a great moral victory for the whole American people, placing the rights of the many above the privilege of the few.

It is from this point of view that we must judge the case of the retail merchant. The economist is concerned only with the problem of how to eliminate inefficiency and waste. What he wants to see is every man filling the place where he can accomplish most toward making this earth a better place to live in. In our state, with its wealth of undeveloped resources, we would gladly see one-half, if not three-quarters of our retail merchants forced into other occupations. Such a change would greatly add to our general prosperity. The readjustment would undoubtedly cause some immediate hardship, but ultimately the whole state would be better off. If the parcel post does anything toward reducing our surplus of retail middlemen, it will have performed a lasting service.

EFFECT OF MAIL ORDER BUSINESS ON COMMUNITY DEVELOPMENT: The next question that arises is: how is the development of the mail order business going to affect rural communities? First, on the score of economy, the amount paid out for postage, money-orders, freight and express in the course of a year, would in most communities be sufficient to meet a large share of the expense of a more economical system of supply. In the second place, the more business which is sent away, the less incentive there is to the building up of a strong social and economic center such as should focus the intellectual, social and economic life of the rural neighborhood.

This raises our final question: how can the farmer keep his business at home, and still get his supplies at reasonable prices? The answer has already been anticipated in our discussion of co-operative production and co-operative marketing. Both these kinds of association do some purchasing of supplies at wholesale prices; and from this beginning, it is but a short step to the formation of a separate society for the purchase of supplies. From the standpoints of business training, and community conservation, there is no venture better worth a trial than the co-operative purchase of supplies.

ADVANTAGES OF CO-OPERATIVE SUPPLY: Indeed, for purposes of promoting the economic organization of rural communities, any association which has a purchasing department possesses certain advantages over all other forms of co-operation. In the first place, its results are immediate, and easily

grasped, even by those whose business training has been neglected.

This is essential if the proposition is to appeal to the average farmer. He is apt to be very suspicious and cautious when asked to help finance a creamery, a cannery or a warehouse. Its success is not yet assured. Its promised advantages belong to the vague possibilities of the seasons yet to be born; and the farmer's vocation is not such as to establish confidence in the business man's habit of discounting the future. He has never been able to predict a year ahead with any accuracy either the yield of his crop or the prices he will receive for it. He has seen potatoes selling at a dollar a bushel when he had few to spare, and the very next year, when he has a large supply, the price is so low as scarcely to pay for the digging. So it has happened with different farm products, over and over again; and consequently, the farmer has grown inherently suspicious of most schemes which make promises for the future. Hence, the difficulty of getting any organization started which demands a present sacrifice for a future gain.

This difficulty, however, does not loom so large in the case of co-operative buying with a view to saving the middlemen's profit. There are so many things that the farmer needs every month of the year. He knows exactly what he has been paying for them. If an association is formed to get such supplies at wholesale prices, it makes no strain upon his imagination to see just where he benefits through co-operation. If he saves \$10.00 or \$20.00 in buying his season's coal, the same on his twine supply, \$30.00 on his year's sacks, or \$100.00 in buying feed for his dairy herd, it takes but little arithmetic and book-keeping to figure out what his society has saved him in the course of the year. If his share of the expense of running the organization has been \$20; and it has saved him \$180 during the year in lower prices on purchases, he knows instantly that he is better off by \$160 from having been a member of the association. Under such circumstances he will usually be a loyal supporter of the farmers' society.

Hence it is, that the backbone of many of our most successful farmers' organizations for purposes of production lies in their co-operative purchasing departments. This is true of

creameries, cow-testing societies, fruit growers' associations, co-operative warehouses, grain elevators, and many others. These are uniformly most loyally supported where they save their members most in buying their supplies. Let us take a few illustrations which bring this out more clearly.

SUPPLY THROUGH COW-TESTING ASSOCIATIONS: Few if any co-operative societies are more difficult to maintain continuously than are cow-testing associations. Most farmers who have their cows tested for a season, consider that they know the relative productivity of the members of their herds, and refuse to continue the organization. Now it takes but little insight into the needs of our American dairying communities to convince us that a temporary cow-test of one season goes but a little way toward solving the problems of the dairy farm. What is needed is a permanent society with continuous records, showing progress from year to year, inculcating a community pride, and promoting a healthy rivalry among dairymen. When farmers have once caught the true co-operative spirit, there is no difficulty in securing this permanence; but in the meantime any extra incentive to co-operative loyalty is desirable.

There is no surer method of cementing the members to their organization than that of co-operative buying. Some one or two commodities are selected which all the farmers need, and these are purchased in wholesale quantities. This keeping of records and the purchase of supplies are often successfully combined in the cow-testing association. Professor R. W. Redman of the University of Maine writes concerning two societies in his state: "In one cow-test association, the purchase of grass seed enabled them to save nearly money enough to run the whole association for a year; and at the same time, the members obtained a much better grade of seed than was offered on the local market. Another association purchased during the winter, 16 car-loads of grain, and 3 cars of pressed hay co-operatively, thereby saving nearly \$1500. Other illustrations might be cited from the experience of cow-testing associations both in this country and abroad. The suggestion is worthy of careful consideration; for not only is the much-to-be-desired permanence of the society secured, but the equally

important end of education in the principles of co-operation is attained at the same time.

Co-operative supply forms an important side line in many other branches of agricultural organization. In our account of the Farmers' Elevator Movement in the preceding chapter, we had occasion to refer to the immense savings which the farmers make through the co-operative purchase of such farm necessities as coal, lumber, machinery, wire fencing, posts, tile, flour and feed. The saving on these commodities in many cases goes a long way toward meeting the expense of the organization.

In like manner, the co-operative purchase of boxes, crates, spraying material, seeds, and fertilizers, forms the back-bone of most of our progressive fruitgrowers and truck-gardeners' associations.

THE PATRONS OF HUSBANDRY: Many similar illustrations could be given from the activity of our great organization for the social and educational betterment of rural life, the Patrons of Husbandry. In general, it may be said, however, that ever since the reverses which followed the ill-timed and headlong rush into all sorts of co-operative enterprise which marked the early period of its history, the Grange has held timidly aloof from any systematic program of economic co-operation. Such ultra-conservatism results from an entire lack of historic perspective. Grange leaders fail to see that the ventures of the period between 1870 and 1898, were of a piece with the frenzied finance and economic unrest which characterized the three or four decades following upon the civil war, as it has no other epoch of our history. The Grange, like the numerous other rural organizations, which were swamped in the speculative mania of the period, was simply a victim of circumstances. Of all the farmers' organizations formed at this time, the Grange alone survived; but it did so in an emasculated condition which deprives it of much of its possible usefulness.

This does not mean that the Grange should become merely a buying and selling organization. But it does mean that in his role of educator, every granger should be a close student of the economic problems which underlie all phases of rural better-

ment. It seems to me that the most general weakness of the present-day Grange activity is its mediocrity. Not that it fails to deal with vital issues, but it does so in a conventional temporising manner which seldom gets near the root of the matter, and is occasionally deliberately self-deceptive.

The Grange is far and away our greatest farm organization. It is today face to face with opportunities such as never before presented themselves. There is a growing interest in the different forms of co-operative association which is country wide. Under leaders of constructive vision, the Grange should be directing the movement into conservative and profitable channels. Instead of this, we find it in many sections losing ground before other associations which are better meeting modern rural needs.

ECONOMIC ACTIVITY OF THE GRANGE: Nevertheless, the Grange has scores of examples among its own locals of societies which have made themselves economically indispensable to their respective neighborhoods. There are grange warehouses for marketing farm products, stores for the purchase of supplies, companies providing farm insurance at cost, and banks, of which the stockholders are all Grangers. In fact, there is scarcely any branch of economic activity directly affecting farm life, which is not carried on co-operatively by some Granges.

In the case of the Granges of Johnson County, Kansas, we have an unusual development along economic lines, somewhat to the neglect, apparently, of the usual social and educational activities. The co-operative enterprise of the Grange in Johnson county is remarkable, also, in having an unbroken record of efficient service lasting since 1875. Of the hundreds of rural co-operative enterprises which sprang into being about that time, nearly all succumbed within a few years.

A GRANGE STORE: The idea of a co-operative store modeled on the Rochdale plan was hatched in the "Lone Elem Grange No. 152" in 1875. The other Granges of the county were informed regarding the scheme; and after a number of joint meetings, the "Johnson County Co-Operative Association, No. 118 of the Patrons of Husbandry" was "formed for the purpose of establishing and maintaining general trade in

merchandise, farm products and machinery for the mutual benefit of the shareholders and customers." The store received its charter June 24, 1875. Up to the first of January, 1912, it had during its operation of 36 years, made sales amounting to \$7,969,418.96, clearing \$502,505.54 in net profits.

Its success has been due to two factors, careful, conservative management, and faithful adherence to the Rochdale plan of operation. That is, it buys for cash and sells for cash at regular retail prices. Out of the gross yearly profits are paid running expenses. Then, of the net earnings, one per cent is turned into the surplus fund, seven per cent dividend is paid on the stock, and the remainder is returned to the patrons of the store as a percentage upon the amount of their purchases during the year. Stockholders receive twice the percent on purchases given to non-members, while persons buying from the store who are not Grangers receive no rebate.

There are eighteen Granges in the county, with a membership of about 1,500. The number of stockholders in the store varies between 800 and 1,000. The present capitalization is \$100,000. It is divided into shares of \$5.00, which sell at par, and can be held only by Grangers.

A GRANGE BANK: The success of the co-operative store and the training and confidence it had engendered among the patrons paved the way for new applications of the co-operative principle. The opportunity came in 1883, when the only bank in Johnson County failed, involving the people of the county in losses to the extent of about \$80,000. The Grangers determined to organize a bank of their own, and supply their own demand for credit. On June 9, 1883, they secured a charter for "The Patrons' Co-operative Bank of Kansas."

As it now stands, the bank has a paid up capital of \$50,000, and has set aside a surplus amounting to \$50,000 more. Its stock is held by an average of about 166 Grangers. It is of the par value of \$100 a share, and sells at a premium of 300 per cent, being hard to secure at that. The bank is a prosperous institution and reflects credit on the enterprise of Johnson County Patrons. But except for the limiting of

the amount of stock one member can hold to ten shares, and the rule allowing each member but one vote regardless of his stock holdings, the word "Co-operative" in its title is a misnomer. It is purely a joint stock company limited to members of the Patrons of Husbandry.

GRANGE CO-OPERATIVE INSURANCE: Much more in line with the spirit of true co-operation was an organization formed in 1889 at Olathe, known as the "Patrons' Fire and Tornado Association of the State of Kansas." Up to that time the rates on farm insurance for the State of Kansas had averaged \$20 on a \$1,000 policy for five years. A study of insurance statistics convinced the farmers that this rate was altogether too high. The Grange organization was launched in the belief that fifty per cent could be saved on the old-line rates through co-operation.

In a pamphlet by Robert J. Ray, the essential features of the articles of association are given as follows:

(1) "All persons becoming insured in this association must be and continue to be Patrons of Husbandry in good standing.

(2) "To be an annual election from members of the association of President, Secretary, Treasurer, eight Directors and two Auditors, to hold office for one year.

(3) "Board of directors to have the general management and supervision of the business of the Association.

(4) "Among other causes, the dues of the insured in his subordinate Grange, being more than six months in arrears, or the non-payment of assessments as rules of the association direct, may sever a member's connection with the association."

For the first decade of its existence, the average cost of insurance to the farmers was \$22.57 per \$1,000 for ten years, or \$11.29 for a five-year policy—\$2.26 a year. Since 1900 rates have varied much from year to year, as indicated by the following table:

COST OF A \$1,000 POLICY.

Year.	1 Year.	5 Years.
1900	\$.84	\$ 4.20
1901	1.84	9.20

1902	2.03	5.90
1903	3.39	11.95
1904	1.43	7.15
1905	2.00	10.00
1906	2.59	12.00
1907	1.32	6.60

The growth of the association has been rapid and constant. By 1900, the membership was 902, with 1,250 policies in force. Within the next seven years both business and membership was almost trebled; totaling 2,527 members, and 3,541 policies in force. Subsequent to 1907, I have not been able to get exact statistics of the development of the association; but am assured that its growth has been more rapid than ever. Moreover, since only Grangers can become members, and since confidence in the association is rapidly increasing, co-operative insurance is becoming a mighty force in bringing members into the Grange throughout all Kansas.

Some have complained that the Grange in Johnson County has lost sight of its true social and educative purpose in the bread-and-butter scramble of business activity. The ground for this complaint is more apparent than real. It is true, perhaps, that the Grangers of Johnson County have become so dependent upon their store and insurance company, that the welfare of the order of Patrons of Husbandry is bound up with the success of these economic organizations.

This is to be regretted, as the Grange is bigger and more important than any store, bank or insurance company. But that the people have lost ground socially, intellectually or morally as a result of their co-operation, is to be most emphatically denied. For thirty-seven years these Grangers have been learning to put into practice the very principles that other Granges have spent all that time preaching about. Now, preaching which does not result in concrete evidence of progress always degenerates into a vice. It becomes a tale oft told. It paralyzes action by creating the felling that virtue is attained by preaching or listening to the vaporings of others. By learning to do things, the Johnson County Grangers have escaped the vice of preaching; and besides, those who have met with them in their homes, in their local Granges,

and in their co-operative associations, affirm that they are no whit behind the most orthodoxly lectured Grange community in any particular.

Their training in co-operation has engendered a community spirit and sense of social solidarity such as is seldom found in American rural life. It is the same spirit which is coming to be recognized as typical of all highly organized rural communities. It is the spirit which has made the Eastern Shore of Virginia famous, which is bringing Monmouth County, New Jersey, to the front, which has told the story of Hood River, Oregon, round the world. When co-operation, which means mutual helpfulness, permeates the very foundation of life, the getting of a living, there is bound to be a reaction on character. This character building process is developing rapidly in Kansas, members are crowding into the Grange because it is helping to solve that problem, which is the essence of all morality and all religion—the conservation of human energy and means.

CO-OPERATIVE PURCHASING THROUGH THE FARMER'S UNION: Another great farmres' organization which has made a strong feature of buying farm supplies co-operatively is "the Farmers' Educational and Co-operative Union of America." The remarkable growth of this organization is largely due to the ease with which it adapts itself to the economic needs of all sections of the country. It is essentially a business organization whose chief concern, as we have seen, is the marketing of farm products. But in the busy first decade of its existence, though statistics are not available, it has saved its members millions in the purchase of supplies. Its system of warehouses dotting twenty-one states of the Union, serve as distributing points. Hundreds of them handle coal, fence wire and posts, sacks, binder twine, lumber, farm machinery, flour and feed, oil, sugar and other groceries in carload lots, saving the middleman's profits. The Union also operates many co-operative stores on the Rochdale plan, similar to the Grange store just described. Among its enterprises are banks, insurance companies, flour mills, fertilizer plants, and many others. The Farmers' Union Phosphate Company of Georgia,

for example, owns its own phosphate factory and six hundred acres of phosphate lands.

FARMERS' UNION IN OREGON: We may take the brief history of the Farmers' Union in our own state as illustrative of its activity in the purchase of farm supplies. The Farmers' Union movement in the Northwest began April, 1907, with the organization of Locals No. 1 and No. 2 at Waitsburg and Prescott, respectively, in the State of Washington. Previous to this, three Locals had been organized near Sherwood, Oregon; but they had only a brief existence. The movement spread a-new to Oregon in the summer of 1908 through the efforts of the Washington organizer, A. A. Elmore. Five years' of growth shows 70 local unions in Oregon, with a membership of close upon 5,000 farmers.

NORTHWEST GRAIN SACKS: The organization in our state, as elsewhere, is primarily a marketing association; yet I believe that the co-operative purchase of grain sacks has been the most powerful factor in its development. As practically all of the grain of the Oregon, Washington and Idaho wheat belt is shipped in sacks, immense quantities of these are consumed every year. For a number of years previous to 1908, local dealers had been charging ten cents a piece for sacks. In February of that year, most of the local unions of the Northwest first united their orders in a single deal at Walla Walla; and brought the price from 10 cents a piece to $7\frac{1}{4}$ cents.

In July of the same year Crook County Unions, who had not entered the Walla Walla contract, were being charged 11 cents. They wrote Secretary-Treasurer, F. A. Sikes, asking him if he could not secure for them better terms on an order for 14,000 sacks. He succeeded in filling the order at $7\frac{1}{8}$ cents laid down in Shaniko, thus saving the Crook County Unionists a lump sum of \$329.37. The next year, 1909, sacks were bought at $6\frac{1}{4}$ cents; and the year following, a deal for 3,000,000 sacks was made at Walla Walla at $5\frac{3}{4}$ cents delivered. This meant a saving of \$127,500 under the prevailing prices before the Union entered the field. In 1911, the price paid was $6\frac{1}{4}$ cents; and 1912, from $6\frac{1}{4}$ cents to 8 cents, depending on the time of buying.

In November of 1912, another assembly of Farmers' Union representatives convened at Walla Walla, to consider the grain bag question for 1913. Our sacks are imported from India. They are made of jute, grown and manufactured by cheap Hindu labor. Now, it appears that within the last year enterprising Americans have organized a sack trust in India; and they hope to make the Northwestern farmers reward them richly for their foresight and enterprise. Their aspirations formed the bone of contention in the Walla Walla meeting. Two alternatives presented themselves: either the abandonment of the sacking method of handling grain in favor of elevators at shipping points and steel tanks on the farms, or the purchase of cotton bags from the cotton-growing states. The former plan will undoubtedly ultimately be adopted; but in the meantime, orders aggregating about nine and a quarter millions of sacks have been placed in the hands of the Farmers' Union Tri-State Terminal Warehouse Company at Seattle, with instructions to purchase "when it seems best in the judgment of the agents in charge."

OTHER PURCHASES: But the Oregon Farmers' Union has by no means limited its purchases to sacks. Practically all of the locals make purchases, varying with the needs of the locality. Here, for example, is the list of the Milton Local: Coal, wood, lubricating oil, coal oil, binder twine, sugar, raisins and beans. On most of these they save from 30 to 40 per cent. Our Corvallis Local, No. 81, is one of the youngest of the fraternity of local Unions. Yet it has made purchases amounting to \$689.00, on which it has made an average saving of 21 per cent. Its list includes flour, salt, sugar, raisins, grain, sacks and binder twine.

CO-OPERATIVE STORES: Besides the goods purchased through local societies, the Farmers' Union has organized three stores in Oregon. The first and most important, is the "Union County Co-Operative Association," having its principal place of business at La Grande. This is a truly co-operative store of the American Rochdale type. That is, all persons, male or female, are eligible for membership on equal terms. The terms consist in the filling out of an application form, and the payment of a membership fee of \$100, at least \$25.00 of

which must accompany the application. The remainder may be paid in installments. The "Membership Certificate" bears a uniform rate of 6 per cent. Out of the gross profits are paid all running expenses. Then, out of the net profits, not less than one per cent per annum is set aside for a sinking fund, the six per cent is paid on membership certificates, and the remaining profits are divided among patrons of the store as a percentage on the amounts purchased, non-members receiving one-half the profit paid to members.

The store now operates branches at Imbler and Elgin in Union County, both doing business on the same basis as the parent store. The association does a very general sort of business, handling about everything that its patrons need, from nuts and candies to farm machinery. Within the past nine months, the stores at Imbler and La Grande have paid back to patrons and shareholders, over \$1,800 in dividends on purchases and interest on membership certificates.

Here again, the growth of the association and the expansion of its business has a dollar-and-cents basis. People are crowding into the society because they cannot afford to keep out. But this is not the whole story by any means. The educational value of the association to its members will ultimately outweigh all pecuniary advantages. Already its influence is being manifested in greater business insight, and a franker recognition of the paramount importance of the square deal, in all economic relations. This influence will react upon farm management and the home relations, thus transforming character, and resulting in an all-round better citizenship. The Farmers' Union deserves great credit for having initiated a movement which is proving of such benefit to the community at large. The other Oregon Farmers' Union Stores are: one at Coquille, Coos County; and one at Haines, not yet run co-operatively.

PROSPECTS FOR CO-OPERATIVE SUPPLY IN OREGON: And now let us ask: What of the future of co-operative supply in Oregon? Is it too much to predict that within the next ten years every county in Oregon will have its system of co-operative stores on the Union County plan? It remains for the farmers to say whether such an ideal shall become a reality or not.

Then, on the Rochdale co-operative wholesale plan, they can establish the largest wholesale business in the state, which shall purchase goods for all of the stores, not in carloads, but in train and ship-load quantities. There is nothing impossible in such an ideal. English workmen had intelligence and energy enough to blaze out through an unexplored territory a pathway which is not hard to follow. Surely Oregon farmers are equal to the task.

AMERICAN SOCIETY OF EQUITY AND GLEANERS: Meanwhile, other states are forging ahead in the co-operative supply movement. The great organizations mentioned in the preceding chapter, the "American Society of Equity," and the "Ancient Order of Gleaners," are doing for the Middle States what the "Farmers' Educational and Co-operative Union" is accomplishing for the South and far Northwest.

To take the supply of binder twine as one illustration, the American Society of Equity, which is over 10,000 strong in Wisconsin, has secured the establishment of a binder twine factory at the state prison, thus performing a tremendous service for the farmers of the state in providing cheaper twine. In like manner, the Gleaners, which have their stronghold in Michigan, were instrumental in having a twine factory operated in connection with the state prison at Jackson. Moreover, every pound of twine manufactured at the prison for the past four years, has been marketed co-operatively through the local Gleaner Arbors; and sold to the farmers at actual cost. Both these organizations also do co-operative purchasing of other supplies through their local warehouses, on the same basis as the Farmers' Union is doing in Oregon.

Moreover, the Gleaners has a unique feature in its system of fraternal insurance, through which it aims to provide protection to farmers against sickness, death and old age, at actual cost. Such a scheme is entirely feasible if organized on sound business principles. Whether the Gleaner insurance is so organized, we are not prepared to say without a careful examination of their plan. This would require more space than we can give to the matter here. The organization is as yet too young to have been tried by the great test of time, before which most fraternal insurance societies have not been able to stand.

THE RIGHT RELATIONSHIP LEAGUE: Our treatment of co-operative supply would be inadequate without a brief account of the work of the Right Relationship League of Minneapolis, Minnesota. The League is fundamentally an educational institution devoted to the spread of the principles of co-operation, on the Rochdale plan. It publishes a magazine, "Co-Operation," setting forth the progress of the movement in America; and filled with the contagious enthusiasm of its editor, E. M. Tousley, the Secretary-Treasurer of the League.

During the past six years, the Right Relationship League has been giving its attention chiefly to the establishment of co-operative stores. Up to August, 1912, there had been organized 112 such associations. Of this total, 55 are in Minnesota, 41 in Wisconsin, 12 in the Dakotas, 3 in Washington and 1 in Illinois.

Capital is raised by selling shares, upon which a fixed rate of interest is paid. Membership is open upon terms of equality to all who apply, and who are able to pay for at least one share of stock. The shares are of the par value of \$100; and if necessary, may be paid for in small instalments. In fact, after an initial payment has been made, the average family can meet the remaining instalments out of the profits on their purchases.

The business principles of these stores are strictly in accord with the Rochdale model. They buy for cash, and sell for cash at regular local retail prices. Some stores almost meet their monthly salary expense out of the discounts allowed by wholesalers on cash payments. The country stores all accept certain lines of farm produce at current prices as the equivalent of cash.

From the profits, are met all running expenses. Then a safety-fund, and an educational fund, for the purpose of spreading a knowledge of co-operation, are provided for by a small levy upon the net profits. The remainder is divided among the patrons of the store in proportion to their purchases. These so-called dividends are paid to non-members as well as to members. In order to encourage membership, and the accumulation of an adequate working capital, however, members receive double the percentage paid to non-members.

CONCLUSIONS AND SUGGESTIONS.

We have already overstepped the limits allotted to this bulletin; but cannot refrain from adding a few conclusions, and some parting suggestions to the student who is interested in the organization of agriculture.

A general study of American agricultural conditions indicates that the economic and social problems pressing for solution are fully as vital to rural welfare as are questions of technical agriculture. The whole course of the economic history of the United States, as well as the experience of farmers in countries like Germany, Denmark and Ireland, demonstrates that these problems can best be solved by organization.

The form of organization best adapted to agriculture has proved to be the co-operative association. The experience both of this country and of Europe proves that well managed co-operative associations bring to the farmer benefits similar to those attained through consolidation in industry and commerce. At the same time, none of the evils which have made the trust a menace to American society can be laid at the door of agricultural organization.

We have shown that co-operative societies among farmers are improving the quality and increasing the quantity of various agricultural products; that they are an incentive to better business methods; that by joint marketing they lower expense and secure better prices for commodities; that by co-operative purchase they make immense savings in obtaining farm supplies; and finally, that they promote neighborliness, stimulate a sense of social solidarity, create a desire for education, and result in an all-round better citizenship.

SUGGESTIONS FOR THE STUDENT: The greatest single enemy of the rural community is ignorance. No man needs a keener insight into the springs of progress, a more profound knowledge of human nature, nor a more elastic patience, than the man who would work for a new era in American agriculture. First of all, he must be a student. He must read broad-

ly. Literature, History, Sociology, Political Science, Political Economy, and any other subjects for which he may have time or inclination—all lines of study, in short, will add to his power and influence. But above all he must be master of the principles of scientific agriculture, the elements of practical sociology, and the fundamentals of rural economics. The time is now past when "any old thing will do" in rural leadership and rural education. The next decade will see great changes in rural life and ideals; and only those with patience and ability to acquire the most thorough preparation need expect to hold positions of responsibility as rural leaders and educators. But above all, the man who would be a molding factor in the new rural civilization must be a "good mixer." He must cultivate the ability to meet men on any level and win their confidence.

On subjects of technical agriculture, the student will find no end of books. Besides, experiment station and departmental bulletins covering every phase of the subject, may be had for the asking. We here offer a few suggestions for the beginner in Agricultural Economics and Rural Sociology. These will give him a start and supply him with bibliography for further study and research.

AGRICULTURAL ECONOMICS: The only general work which we can recommend is Carver's "Principles of Rural Economics." This is a scholarly book, and at the same time, quite readable. (Published by Ginn & Company, price \$1.25). On marketing, Report 98, Office of the Secretary, "Systems of Marketing Farm Products," has just been issued by the Department of Agriculture at Washington, D. C. We have not yet seen this report; but it will undoubtedly be found helpful. (To be obtained only from the Superintendent of Documents, Washington, D. C.; price 25 cents). Coulter, "Co-operation among Farmers" (published by the Sturgis and Walton Company, price 75 cents), gives a good treatment of the principal types of co-operative society found in this country. The Wisconsin State Board of Public Affairs has recently published Part I of a "Report upon Co-operation and Marketing," dealing with "Agricultural Co-operation and Marketing." This brings out many interesting facts on co-operation among farmers in Wisconsin, together with a bibliography and sketches

of co-operation as established in Denmark and Ireland. For the advanced student, the publications of the International Institute of Agriculture at Rome are indispensable. Every student should at least possess Volume I of "Monographs on Agricultural Co-operation in Various Countries." This volume outlines the development of the co-operative movement in Germany, Belgium, Denmark, British India, France, Great Britain and Ireland, Norway, Holland, Russia and Sweden. (Price 70 cents, to be had of the principal book stores, or directly from the International Institute of Agriculture at Rome, Italy.

In this Monograph the student will find treatments of the co-operative credit systems of the various countries. But the great authority in English on Co-operative Credit is Henry W. Wolff. His principal books on the subject are "Co-operative Banking" and "Peoples' Banks," both published by P. S. King and Son, London. An old report of the Department of Agriculture, Washington, D. C., Division of Statistics, Miscellaneous Series, No. 3, by Edward T. Peters, entitled "Co-operative Credit Associations," is interesting as being the first treatment of the subject from the American point of view. "Co-operative Credit Associations in the Province of Quebec," (by Hector Macpherson, published by Jackson Press, Kingston, Canada, (price 50 cents) sketches the European movement and treats the establishment of the Raiffeisen Credit Unions in Quebec and Massachusetts. The sociological influence of the credit association, forms the burden of this thesis. Finally we may mention the "Preliminary Report on Land and Agricultural Credit in Europe" setting forth President Taft's proposal to introduce co-operative credit in the United States, issued by the Department of State, Washington, D. C.

RURAL SOCIOLOGY: A general text, "Constructive Rural Sociology" by John M. Gillette, published by Sturgis and Walton, has just come from the press. Only about two hours ago, a copy arrived at this office. Hence, we have only had time to glance through it. It appears at least to face squarely most of the important rural problems; and its bibliographies on the subjects treated in the various chapters are good. Moreover, it enjoys the distinction of being the only book yet

published covering the entire field of Rural Sociology. We would recommend also the Report of the Country Life Commission, published by the same company; and the two little books by President Butterfield, "Chapters in Rural Progress," and "The Country Church and Rural Problem," both published by the University of Chicago Press.

Those who are interested in the point of view set forth in this bulletin, which is sociological as well as economic, will find it fully worked out under the title "Economics Applied to Rural Problems," which is now under preparation.

FARM ACCOUNTING: In agricultural accounting, besides Part I of this series by Dean J. A. Bexell, we would recommend the following: Farmers' Bulletin 511 on "Farm Bookkeeping," by Edward H. Thomson, Department of Agriculture, Division of Publications, Washington, D. C.; Bulletin 121 of the Iowa Agricultural Experiment Station, Ames, Iowa, by M. Mortenson on "Creamery Bookkeeping"; and "Farm Accounting and Business Methods" by J. A. Bexell, to be obtained from the College Book Store, Corvallis, Oregon.

THE WASTE OF DUPLICATE ORGANIZATIONS: In reading the foregoing pages as they come from the press, it occurs to me that this bulletin would fail of its purpose did it not contain a warning against the evils resulting from rival rural organizations. It is an evil, to be sure, which we have thus far largely escaped in Oregon. Our two great state organizations, the Grange and the Farmers' Union, are now working together harmoniously; and each is coming to recognize that the other has a definite task to perform in uplifting Oregon agriculture.

Some states are not so fortunate. We occasionally find the four great organizations, the Grange, the Gleaners, the American Society of Equity, and the Farmers' Union, in active competition, each undermining the influence of the other and immeasurably weakening the farmers' cause. The reason lies in the fact that each of these organizations has its officialdom, sworn to propagate its own special brand of salvation for the farmer. In the process, the best interests of the rural community are often sacrificed. Let us hope that Oregon agriculture may never fall a prey to such mistaken zeal, and become a house divided against itself.

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